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THE NATURAL GEOGRAPHIES

NATURAL

ELEMENTARY GEOGRAPHY

BY

JACQUES W. REDWAY

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NATURAL ELE. GEOG.
E-P 2

PREFACE.

THIS Geography has been prepared along the lines recommended by the Committee of Fifteen in its recent report on Elementary Education.

It is designed for a pupil's first text-book in the subject, and is intended for a two-years' course between the beginning of the third and the end of the fifth school year.

It recognizes the fact that geography for schools should be a practical study of man's physical surroundings *in their relations to him.* Hence the central idea of the treatment is *man,* — his history, customs, industries, and commercial interrelations as determined or modified by the inorganic forces of nature.

It recognizes, further, the fact that one of the most important functions of elementary geography is to teach the names, locations, and characteristics of the *countries* into which man has divided the earth. These are the units of the world's geographical intercourse. A knowledge of them constitutes the proper foundation for the intensive study of geography in more advanced grades; while it fits the large proportion of pupils who leave school at an early age to understand the countless geographical references which they will encounter in daily life.

It points out the great linguistic and racial lines that divide the inhabitants of the earth into separate groups, in each of which there is an essential similarity in manners, customs, and general views of life. The states of our Union are divided into groups upon an industrial basis which is simple, practical, and fundamental.

It develops the subject upon a definite and natural plan, and in accordance with approved pedagogical principles. Each lesson, while complete in itself, paves the way to the following lesson. The pupil is led from that which is perfectly familiar and within easy range of his observation, to form concepts of things that are remote and strange; and not until such concepts have been formed are these things named or defined. Generalizations are demanded only after the materials for their formation have been studied. The pupil's own country is presented early in the treatment, and then all other countries are studied in their relations to it.

It treats the subject simply and sensibly, keeping well within the range of the pupil's comprehension, but never descending to baby talk or other adventitious devices to hold his attention.

It demands work from the pupil, rather than from the teacher, while it stimulates independent thought and excites the interest of both. The body of the text abounds in questions that inspire thought, and, at the end of the treatment of each grand division, carefully prepared exercises lead to the correlation and comparison of the parts of the subject already studied, and form a cumulative review and synthesis of the pupil's work.

It provides material for the concentration, or "correlation," of studies. The text exemplifies the fundamental laws of composition, and may be used in language work. The topics at the end of each lesson outline a few paragraphs in which the pupil can reproduce in his own words the main thought of the lesson.

It recognizes the value of map drawing and sand modeling in elementary geography, and introduces them in such manner that they shall be properly used as means to an end, and not as ends in themselves.

The relief maps contain the names of the features represented, and require no "key maps" or other accessories to adapt them for practical use.

The maps of coördinate divisions of the land are drawn on the same scale, so that relative areas are accurately depicted and may be directly compared. Thus, a single scale serves for all the maps of the grand divisions; a single, but larger, scale for the maps of the United States and Europe; and a single, but still larger, scale for the sectional maps of the United States, with the exception of that of the Northeastern States, which is drawn on twice the scale of the others.

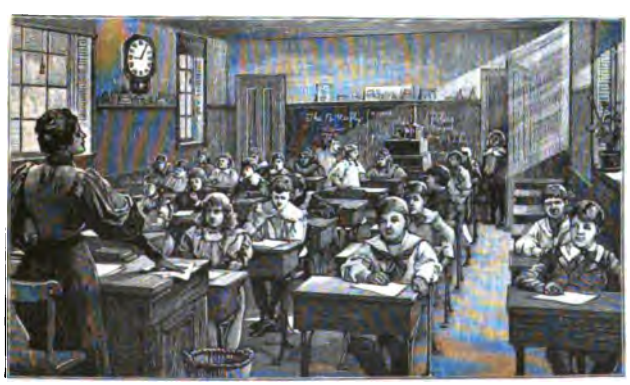
The pictures, most of which have been reproduced from photographs, are of simple subjects within the comprehension of young pupils, and they have been arranged upon the pages in such manner and in such numbers that they serve a really useful purpose in illustrating the text.

The author takes pleasure in acknowledging his indebtedness to Miss Louise Connolly of the Washington (D.C.) public schools, for the active assistance she has rendered in perfecting and adapting his manuscript. Her intimate acquaintance with the work of the schoolroom, as well as with geographical literature, has been of the utmost value; and to her untiring efforts the merits of the book are due in no slight degree. Acknowledgments are also due to Miss Mathilde Coffin of Detroit and Miss Carl L. Garrison of Washington, for assistance in the revision of manuscript and proof, and to Colonel Francis W. Parker of the Chicago Normal School, and Mr. Frank O. Payne of Glen Cove, N.Y., for valuable suggestions and advice.

ELEMENTARY GEOGRAPHY.

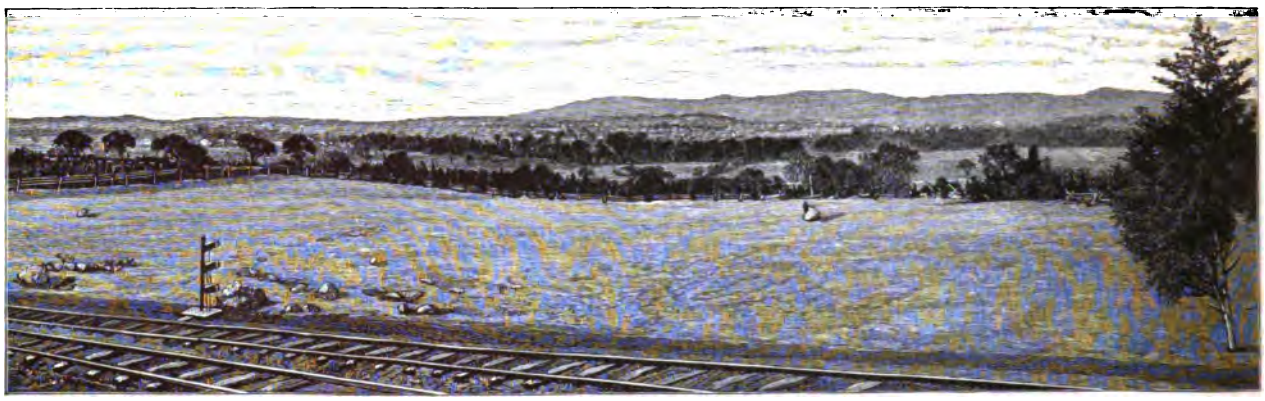
1. Direction — East and West.

Here is a picture of a schoolroom. Can you



tell what time it is by the clock? The boy coming in at the door has been playing in the sunshine on his way to school, and is a little late. The sunshine comes into the schoolroom, too.

Here is another picture of the same schoolroom. What time is it by the clock in this picture? It is late in the afternoon, school has just closed, and the pupils are going home. Is the sunshine still coming into the schoolroom? Does it enter at the same windows through which it came in the morning? Through which windows in the picture does it come in the afternoon? Through which windows does it shine in the morning? On which side of the schoolroom is the sun in the morning? On which side is the sun in the afternoon? So the



The land stretches out from us as far as we can see.

sun is on one side of the room in the morning, but on the opposite side in the afternoon.

Does the sun shine into your schoolroom in the morning? In the afternoon? Can you point to a window through which the sun shines in the morning, but not in the afternoon? To one through which it shines only in the afternoon? Can you point in the direction toward sunset? The side of the room toward the sunset is called the *west* side. Now can you point toward sunrise? The side of the room toward sunrise is the *east* side.

Notice which side of your schoolhouse the sun shines on late this afternoon, and which side it shines on early to-morrow morning, for in the next lesson you will have to point out the east side and the west side of your schoolroom.

The sun shines on one side of the house in the morning, but on the other or opposite side in the afternoon. The direction toward sunrise is called east, and the side of the house or room toward the early morning sun is the east side. The direction toward sunset is called west, and the side of the room or house toward the late afternoon sun is the west side.

2. The Land Ends toward the East.

Point to the east side of the schoolroom. How do you know that it is the east side? Point to the west side of the room. How do you know it is the west side?

What did you walk upon as you came to school this morning? On what is the road or the sidewalk? We walk on the ground, we build our houses on the ground, and the trees and the grass grow out of the ground. We sometimes call the ground *land*. In your walks about home you always find ground to walk on, and although you may come to a pond or a stream of water on which you cannot walk, you can generally see the land on the other side; so you are sure that you have not reached the end of the land.

If you were to start at your schoolhouse and travel on and on in any direction, do you suppose you would ever reach the end of the land? Let us see. Which way shall we go? Stand up and face the east side of the room. We will travel toward the east. We may have to start on foot, and perhaps we must go a little way across the fields, but before long we shall probably reach a road or a railway on which we may ride toward the east. We pass through town after town and through the open country, where we can see a long way over the fields to the *horizon*, or the place where the sky seems to meet the land in the distance. The land stretches out from us on all sides as far as we can see.

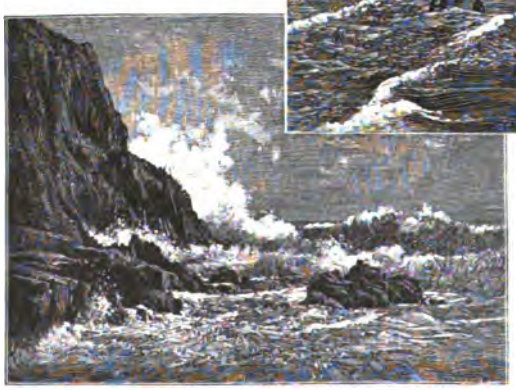
At last we catch glimpses of dark blue water far ahead. It seems to grow broader and wider as we go forward, and finally we reach its edge. It is a vast expanse of water, greater perhaps than any you have ever seen. The

See bottom of last page.

The water extends away until it seems to meet the sky.

shore, or margin of the land, stretches off to the right and to the left as far as we can see; while the water extends away toward the east until it seems to meet the sky, on the distant horizon.

The surface of the water is usually heaving up and down in waves, which, one after another, seem to move swiftly toward the land. If the shore is a flat and sandy *beach*, these waves roll over and fall on it with a roar, in long lines of snow-white foam. If the shore is high and rocky, the waves dash wildly against the rocks with a louder roar, sending white spray high into the air.



A high and rocky shore.

We have actually reached the end of the land toward the east! The water before us is the *sea* or *ocean*. It is different from most streams and ponds, not only because we cannot see across it, but also because its water is so salt that it cannot be used for drinking.

The land which we walk on comes to an end at some distance to the east of our home, where it meets the sea or ocean.

The sea or ocean is a great body of water so wide that we cannot see across it.

The water of the sea is so salt that it cannot be used for drinking.

3. The Land Ends toward the West.

Which way did we travel in the last lesson? Stand with your back toward the east. In what direction are you facing?

A flat and sandy beach.

We will now travel from home toward the west, to see if the land ends in that direction. We can go most of the way by railroad. At first we may travel over land that seems smooth and level. We pass through many towns, and sometimes we see houses in the country, but not so many as we found when journeying toward the east.

Presently the land before us becomes rough and hilly. The hills are so very high and steep that they are called *mountains*. Their bare and rocky tops seem to touch the clouds, and are often covered with snow even in summer. We cross these mountains only to

find others, and for the rest of our journey we are seldom out of sight of mountains. By and by we reach the top of a mountain from which we can see blue water stretching out in front of us, seeming to meet the sky in the far-distant west.

We go down the mountain to the shore, which stretches out to the right and to the left as far as we can see. The great waves come rolling in and dash into white foam. If we taste the water we find that it is salt. We have reached the end of the land toward the west! The sea or ocean is again in front of us, but now the sea is west of the land, while before the sea was east of the land!

The land we live on is very wide, from east to west. It takes a railway train nearly six days and nights to cross from the ocean on the east to the ocean on the west.

At about noon to-day notice in which direction your shadow falls, and be able to tell about it to-morrow.

The hills are so high that they are called mountains.

TOPICS FOR ORAL OR WRITTEN WORK.

(*Answer in Sentences.*)

I. ENDING OF THE LAND. In what directions does the land end? What is the sea? What is the shore?

II. SURFACE OF THE LAND. What two kinds of land did we travel over? What is a mountain?

III. WIDTH OF THE LAND. How do you know the land is wide?

4. The Land Ends to the North and to the South.

Stand with your right hand toward the east and with your left hand toward the west. The direction in front of you is called *north;* and the direction behind you is called *south*. In what direction does your shadow fall at noon? At noon, how can you find the north? How can you find the north in the early morning or in the late afternoon?

If we journey from home toward the north, we may travel by railway at first; but soon the railway ends. We then travel on foot or in a canoe or boat, for there are many streams and great ponds or lakes over which we may paddle. We shall be many weeks and perhaps months on the way. We must camp out at night, as there are no towns or farms, and but very few people; for our way lies through the wilderness of a great, lonely land.

At last we reach the end of the land, and the salt water of the sea is before us. Here, however, we are likely to find the sea full of great floating fields of ice, for in the far north the winters are so long and so cold that the ice becomes very thick, — so thick that it is not all melted during the short summer.

We have found that the land ends toward the east, toward the west, and toward the north. Point to the east; to the west; to the north; to the south. Let us see if the land ends also toward the south.

When we start from home we may travel at first by rail, but after a while the railway ends, and we must go on foot or on horseback.

We pass through but few towns. The people look and dress and live much as we do at home, but we cannot understand them when they talk, for they speak a language different from ours.

For weeks we travel through dark, gloomy forests, where the trees stand so close together, and the tangled vines are so thick, that we cannot pass through until we have cut a path. In the forests we may see troops of long-tailed monkeys playing in the trees, and flocks of beautiful green, red, and yellow parrots flying about.

The weather is very warm, and if we were

The sea is full of floating fields of ice.

to stay there all the year, we should find that there is no winter and that snow and ice are never seen except on the tops of the highest mountains.

At length we leave the forests behind and enter open country again. As we advance we notice that our shadows at noon fall toward the *south*, instead of toward the north as at home. We also notice that there is a winter season and a summer season, but that it is winter during the months when it is summer at home. Think of it: if we lived there, we should wear overcoats on the Fourth of July and straw hats at Christmas!

We cannot pass through until we have cut a path.

We go forward and gradually reach a colder region, where the winters are long and the summers short, until at last we are stopped by a vast expanse of salt water. The sea is again before us! We have reached the end of the land toward the south!

TOPICS FOR ORAL OR WRITTEN WORK.

(*Answer in Sentences.*)

I. DIRECTIONS. How can you find north? South? East? West? In what directions does the land end? Where have you found the sea?

II. HEAT AND COLD. What kind of weather is there far north of your home? Where is a land that has no winter? When is there winter in the far south?

5. The Continent of America.

In what directions have we traveled? What has stopped each journey? Where, then, is the sea?

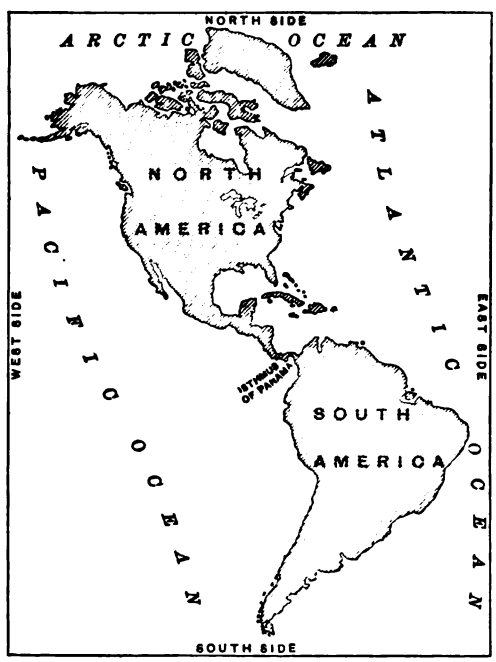
If we travel from home in *any* direction, we shall at last come to the sea, for the sea lies on all sides of the land.

Were we to follow the shore of the sea entirely around the land until we reached our starting place again, we should find that the shape of the land is something like the outline on the next page. The picture which you draw of a house or a tree is smaller than the thing itself. In the same way, this map of the land is much smaller than the land itself. The real land is so very large that it would take several years to walk all around its edge.

On this map the land is shaded, but the sea is white, so you can easily tell the one from the other. The directions are marked near the edges of the map. The east side of the land is the side toward the east side of the map, the west side of the land is the side toward the west side of the map, and so on. You see that most of the land is in one great mass, but that along its margin there are several smaller masses of land, each completely surrounded by water. The continuous mass of land is called a *continent*. It is the continent of America. The smaller masses of land surrounded by water are called *islands*. The continent and islands together are sometimes called simply America.

You will notice that the sea or ocean which surrounds the continent is one continuous body of water; but its different parts are called by different names. What is the name of the part of the sea east of America? What is the name of the part west of America? Of the part north of America?

Is the continent as wide in the middle as it is farther north or farther south? In the middle it looks like a mere strip or neck of land. At the narrowest part of this neck a man might walk across the continent in a single day from the Atlantic to the Pacific Ocean. A narrow neck of land connecting two larger masses of land is called an *isthmus*, which means "neck." Find the isthmus on the map. What is its name? The land is so narrow here that we may say the isthmus connects two *grand divisions* of the continent. One of these is called North America, the other South America. Why are they so called? We live in North America. Find North America on the map.



TOPICS FOR ORAL OR WRITTEN WORK.

(*Answer in Sentences.*)

I. THE MAP. In what respect is the outline map like the land? Name one way in which it is different. Which is the east side of the map? The west side? The north and the south sides?

II. THE CONTINENT. Name it. Name its grand divisions. By what oceans is it surrounded? How is it different from an island? What is an isthmus?

6. Across the Sea to the East.

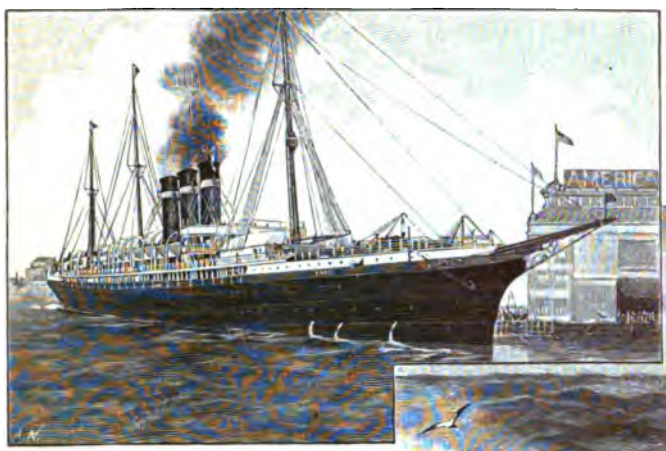
What is a continent? In which continent do you live? In which grand division do we live? Which ocean east of North America?

To-day we will go to the east shore of North America and get on a great steamship in which we will sail out on the Atlantic Ocean. The steamship is built of steel, and there is room in it for more than a thousand people. It is driven through the water, by means of powerful engines, as fast as a freight train moves. We will sail toward the east.

As we move away, the land grows blue and misty in the distance, and finally sinks out of sight behind us. There is now nothing to be seen but the ship, the water all around us, and the sky overhead. We steam along, day and night; the sun seems to rise out of the water in front of us each morning, and to go down into the water behind us every evening.

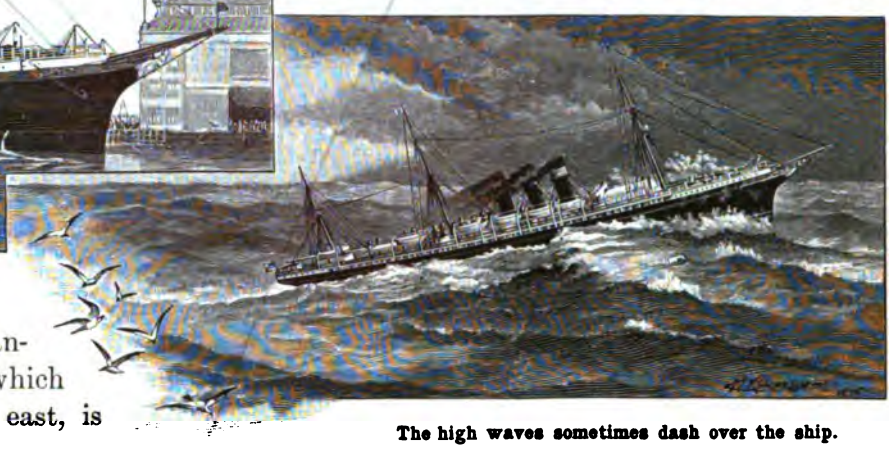
Even when the weather is bright and pleasant, the waves of the sea are generally large enough to make the ship rise and fall and rock from side to side so that it is hard to keep our balance while walking about the ship. But when the storm winds blow, the waves rise high and toss the great ship about as if it were a cork. We must not go out on deck then, for the high waves sometimes dash over the ship, and we might be swept away and drowned. But after the winds die out and the waves subside, we may again go on deck.

All this time the engines have been driving our ship eastward. At last, about a week after starting, we can see land far ahead. As we draw near the land, it seems to rise out of the sea, and its shore extends far to the right hand and to the left. Finally our ship stops, and we go ashore. We have crossed the Atlantic



We will get on a great steamship.

Ocean and have reached another continent! This land, which we reach by sailing to the east, is called the Eastern Continent.



The high waves sometimes dash over the ship.

Near the southeast corner of the map you may see a very large island. What is its name? The word *Australia* means "southern country." What is the difference between an island and a continent? Australia is generally called a continent. Why?

Compare the map of America with the map of the Eastern Continent. Which of these continents is the larger? It is nearly twice as large as America. Name the three continents in the order of their size.

TOPICS FOR ORAL OR WRITTEN WORK.

(*Tell about each Topic in Sentences.*)

I. THE STEAMSHIP. Its material. Its size. Its use. Its swiftness.

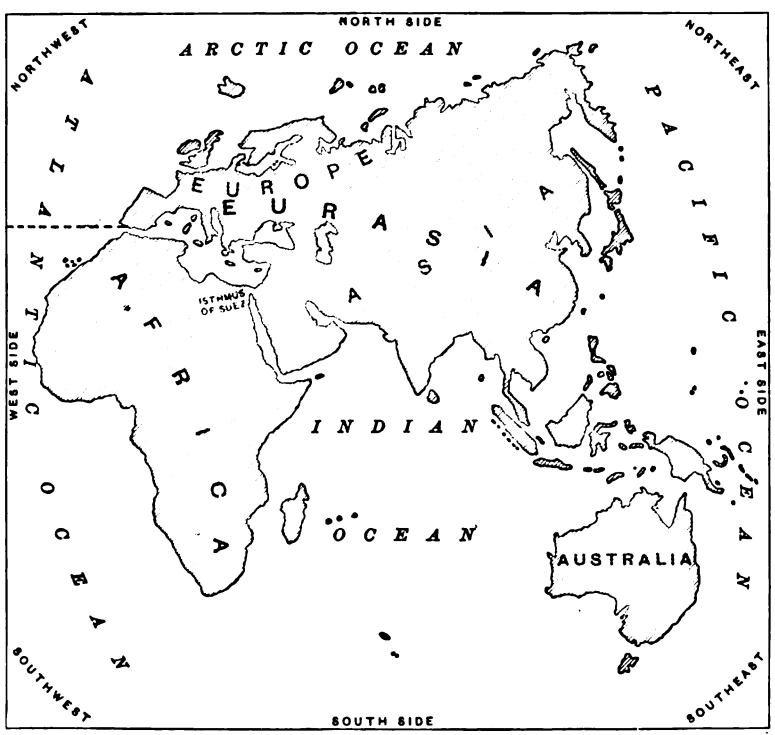
II. THE JOURNEY. Starting place. Direction of journey. Time of journey. Stopping place.

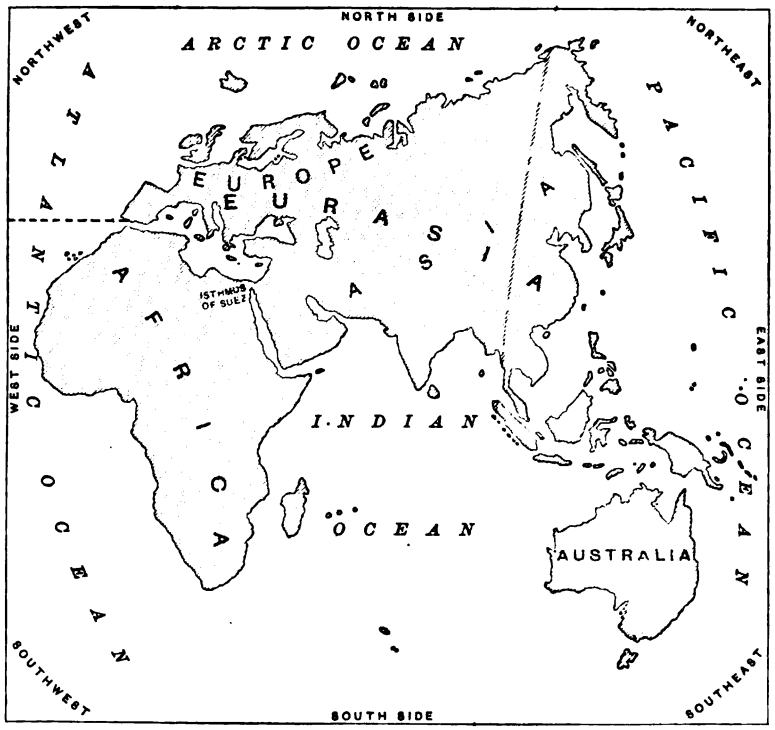
III. MID-OCEAN. By what the ship is surrounded. Where the sun seems to rise and to set.

7. The Eastern Continent.

How many continents have we learned about? What ocean between them? How long does it take to cross from one continent to the other? On which continent do you live? What is the other continent called?

The shape of the Eastern Continent is something like this outline. Are most of the islands near this continent directly east of it? Are they directly south? The direction halfway between south and east is called *southeast;* that between south and west is *southwest.* What is the direction between north and west called? Between north and east? In what direction from the Eastern Continent are most of the islands?





What is the name of the ocean north of the Eastern Continent? Which ocean is east of it? Which ocean is south? Which ocean is west?

In what direction did we cross the Atlantic to reach the Eastern Continent? (The dotted line on the map shows where we approached the continent and landed.) In what direction is America from the Eastern Continent? If we call this the *Eastern* Continent, what may we call America?

Like America, the Eastern Continent is nearly separated into two parts by the ocean. Only a narrow neck of land joins the two parts. What is such a neck of land called? What is the name of the neck which joins the two grand divisions of the Eastern Continent?

What is the name of the grand division southwest of the Isthmus of Suez? The other grand division may be called Eurasia, but the western part of it is often spoken of as the grand division of Europe, while the eastern and larger part of it is spoken of as the grand division of Asia.

TOPICS FOR ORAL OR WRITTEN WORK.

(*Answer in Sentences.*)

I. CONTINENTS. What is a continent? How many have you studied? Name them.

II. GRAND DIVISIONS. Name the grand divisions of each continent.

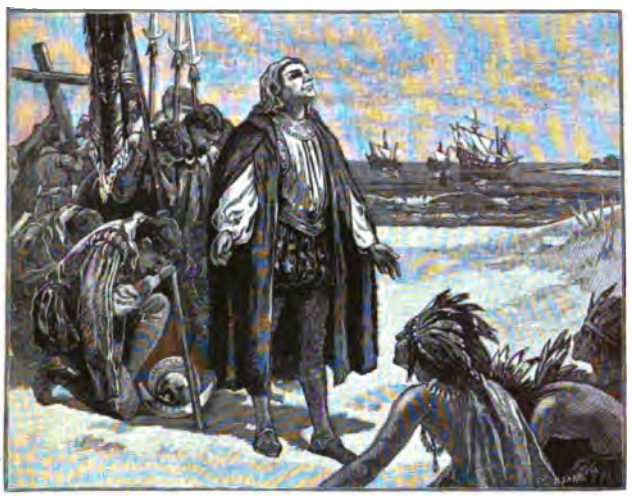
III. OCEANS. What is an ocean? Name those that you have studied.

8. Our Interest in the Eastern Continent.

Although the Eastern Continent is separated from our land by the wide ocean, which some of us may never cross, still there are at least two good reasons why we should learn about it.

In the first place, many of the things in common use come to us from that far-away land. Much of our tea and rice, and nearly all of our pepper and other spices come from Asia. The linen of which your handkerchief is made, and much of the woolen, and most of the silk, of which your clothes are made, come from Europe. Most of the white metal, tin, which forms the outside coating of our tinware, comes from Australia and the islands southeast of Asia. These and hundreds of other useful things are brought to us across the ocean.

But the Eastern Continent is even more interesting for another reason. It is our old home! Perhaps we ourselves never lived there, but our ancestors, that is, our parents, or our grandparents, or our great-grandparents, once lived in Europe; for many years ago all the white people of the world lived in Europe, southwestern Asia, and northern Africa, and most of the white people in the world still live there. So we call the central and northwestern parts of the Eastern Continent the home of the white people or "*Caucasian*" *race*. When our ancestors came to America to live they left relatives behind, some of whose great-grandchildren are still living there; so, though we may not know



The landing of Columbus in America.

them, nearly all of us have distant relatives now living in some part of Europe, and this makes Europe particularly interesting to us.

One of the first white men who came to America was Christopher Columbus. He sailed from the place where we landed on the Eastern Continent, as shown by the dotted line on the map. From what grand division did he come? The part of Europe from which he sailed is called Spain, and is the home of the Spanish people.

On the map follow the shore of Europe to the northeast from our landing place. Close to the shore are two large islands. Part of the larger island is called England and is the home of the English people.

Probably more white people have come to America from these islands and from Spain than from any other part of Europe.

TOPICS FOR ORAL OR WRITTEN WORK.

(*Answer in Sentences.*)

I. THE EASTERN CONTINENT. Why is it useful to us? Why is it interesting?

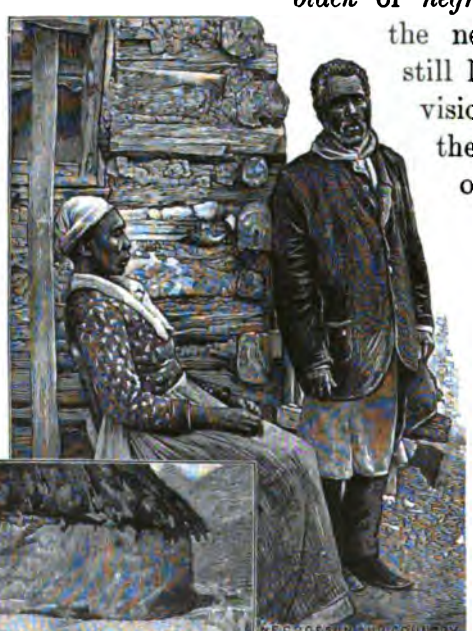
II. WHITE MEN IN AMERICA. Where is the home of the white race? Why are you interested in this race? Who was Christopher Columbus? Why are England and Spain especially interesting to Americans?

9. Homes of the Races of Mankind.

Where is the home of the Caucasian race? Have you ever seen any negroes? Chinamen? Indians?

How does the color of negroes differ from that of white men? How does their hair differ? Negroes usually have broader and flatter noses, and thicker lips, than white men.

The ancestors of every negro in this country came from Africa, for Africa is the home of the *black* or *negro race*, and most of the negroes in the world still live in that grand division. Find Africa on the map. In what part of the Eastern Continent is it?



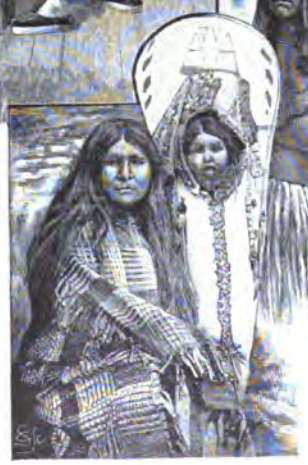
Negroes have been living in this country so long that those we see here have learned to speak and dress and live much as the white men do; but the first negroes who were brought to America were ignorant savages, and many of the negroes in Africa are still savages. They live in rude huts made of mud and grass, and wear little or no clothing.

There is another kind of people that we sometimes see in this country. They have yellowish skin,

and slanting, almond-shaped eyes, and each of them wears his hair in a long braid. They dress in a manner that seems odd to us, wearing loose jackets and queer shoes, and many of those living here are laundrymen. What are these people called?

The Chinese belong to the *yellow* or *Mongolian race*. The home of this race is in eastern and northern Asia. Though but few of them live in our country, there are about as many yellow people in the world as there are white people.

The people that live in the extreme southeast of Asia and in the neighboring islands are somewhat different from the yellow race; their eyes do not slant, and their skin is of a brownish color. They are called Malays. The great islands southeast of Asia are the home of the *brown* or *Malay race*.



When the white men first came to this country, the only people they found here had long, coarse black hair, and reddish-yellow skin. Most of them lived in huts or wigwams made of skins or bark. They wore little clothing, and passed their time in hunting or fighting with bows and arrows. The white men called them Indians.

There are now many more white people than Indians in America, but as the Indians used to be the only inhabitants, and as all the red men in the world still live on this continent, America is said to be the home of the *red* or *Indian race*.

TOPICS FOR ORAL OR WRITTEN WORK.

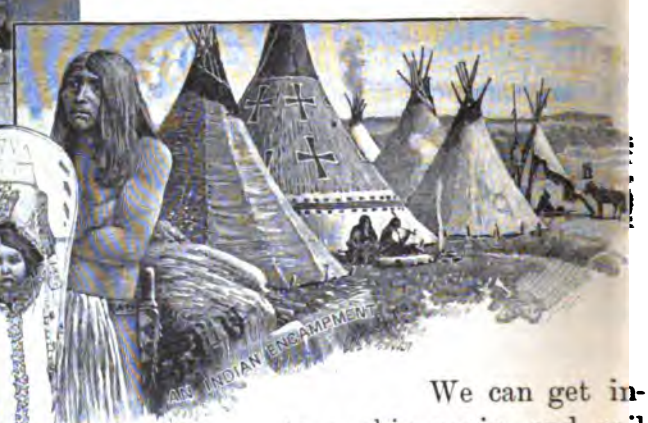
(*Answer in Sentences.*)

I. RACES OF MANKIND. How many races are there? Describe the appearance of one race. Where is the home of each?

II. RACES IN AMERICA. Name and describe the first race that lived here. The second. What other kinds of men have you seen?

10. Our Journey Eastward Completed.

Look at the map on p. 12. In what direction from home did we travel to reach our landing place in Europe? Let us continue our journey to the east across the Eastern Continent.



We can get into a ship again, and sail through the narrow passage south of Spain into the broader body of water which you see on the map between Europe and Africa. Such a narrow passage of water is called a *strait* or *channel*.

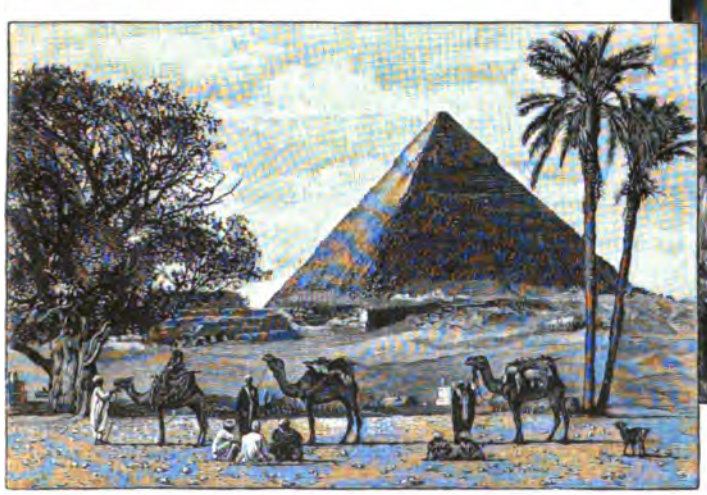
The broad body of water is called the Mediterranean Sea, which means a sea "in the midst of the land." Why is it so called?

How long did it take our steamer to cross

the Atlantic? The Mediterranean Sea is about two thirds as long as the Atlantic Ocean is wide. About how long, then, will it take our steamship to reach the Isthmus of Suez? We will leave the ship there.

Near the Isthmus of Suez are many of the places told about in the Bible. At the African end of the isthmus is the "Land of Egypt." Near by in Asia is the place where Joseph was sold by his brethren, and not far away are the places where Jesus lived.

But we must push onward to the east, for it will take us many months to cross Asia to the shore of the Pacific Ocean. We must travel on camels or on horses, and we shall not see many wagons or carts, for there are few good roads. The people dress in strange fashions; they have curious manners, and speak in languages that we do not understand. Much

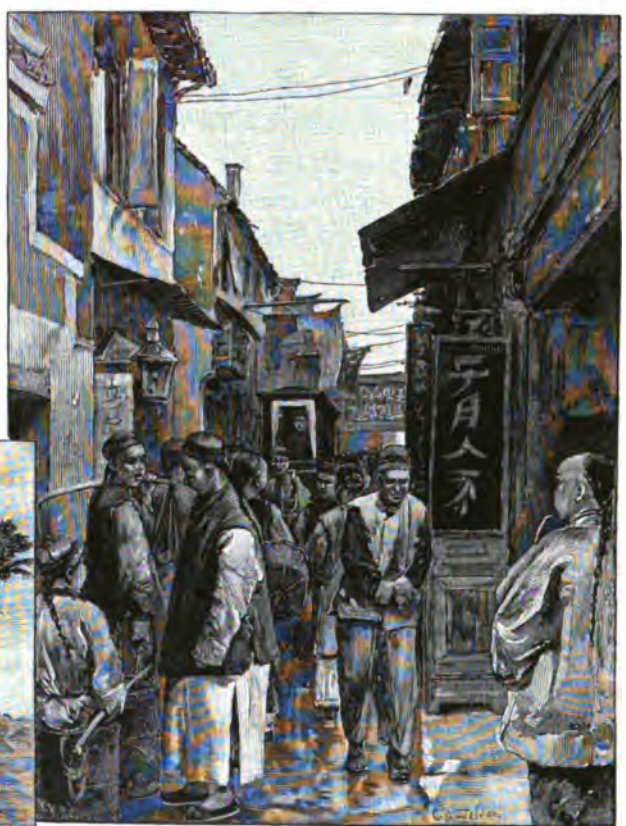


In the "Land of Egypt."

of our way lies over sandy or rocky deserts. Then we climb over mountains so high that their tops are above the clouds.

After a time we descend into lowlands where there are very many people. We cannot understand what they say, but we see that each man wears a braid and has yellow skin and slanting eyes like our laundryman at home. What people are they? But there are so many of them! The land is fairly alive with yellow people; for this is the home of the yellow race. They are all busy, but nearly all of them are very poor. We pass through many large towns and cities, where most of the houses are only one or two stories high, and where there are few horses, carts, or wagons in the narrow and crowded streets.

At length we reach the end of the land, and

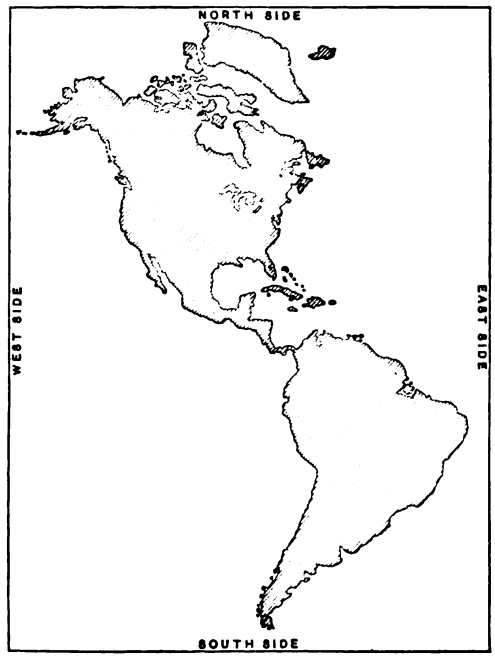


In the narrow and crowded streets.

the ocean once again extends far out to the eastward before us. What is the name of this ocean? Here we find steamships with white men on them, and we sail away from the shore.

We gradually lose sight of the land, and day after day we sail onward, always to the east, with nothing in sight but sky and water. Probably we begin to doubt if there is any land ahead of us, for we have been sailing more than twice as long as it took to cross the Atlantic.

At last, however, land appears before us, stretching far off to the right hand and to the left. Our voyage is ended; we have crossed the Pacific Ocean and have reached the western shore of another continent.



The shape of the continent is like this:

Can you tell its name?

From what land did we start when we crossed the Atlantic Ocean? In what direction did we go? What land did we reach? When we continued our journey, did we change the general direction in which we traveled? What land did we reach at last? From what shore of America did we start? What shore did we reach? Can you explain this?

11. Our Journey Teaches the Shape of the Earth.

Stick a pin into a large, round apple, as in the picture below. With a pencil scratch a line around the apple, moving the pencil always in the same direction. What point on the apple do you finally reach? In your journey constantly to the east from your home, what point did you finally reach?

The continent of America, on which we live, the Eastern Continent, and the oceans on which we have traveled, form parts of the surface of a great ball, which we call the *earth*. In our long journey eastward, over sea and over land, we traveled around this ball until we came again to the land from which we started.

Pretend that your apple is the round earth and that the pin in it is the place where you live. Scratch several journeys round the apple from your home, each in a different direction. What place do you always reach? If you should journey on the earth in any direction from your home, and continue without turning to the right or to the left, what place would you finally reach? Why?

The earth seems to us flat instead of round, because it is so large, and we are so close to it, that we can see but a small part of it.

From a great height in the sky we might see that the earth is round, and it would look something like one of the pictures below. Each picture shows one half of the earth, while the picture beside it shows the other half. A perfectly round body is called a *sphere*. *Hemisphere* means "half a sphere," and as the earth is nearly a sphere, a map or picture of half the earth is called a map or picture of a hemisphere.

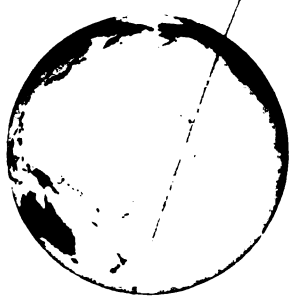
Look at the two pictures below. You see that the continent of America stretches across one side of the round earth. This half of the earth is called the Western Hemisphere. The Eastern and the Australian continents are on the opposite side of the earth. That half of the earth is called the Eastern Hemisphere.

Western Hemisphere.

Eastern Hemisphere.

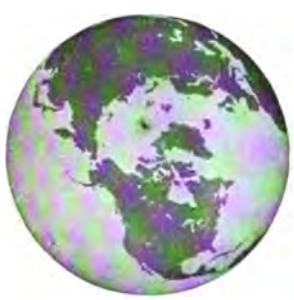
In the first two pictures on the next page you see the Atlantic Ocean stretching across one side of the earth, and the Pacific Ocean covering almost all of the opposite side.

Atlantic Ocean.



Pacific Ocean.

The two pictures below show the Northern Hemisphere from above the most northern point of the earth, and the Southern Hemisphere from above the most southern point. You see that about half of the Northern Hemisphere is land, but that almost all of the Southern Hemisphere is covered with water. The ocean about the most southern part of the earth is called the Antarctic Ocean.



Northern Hemisphere.

Southern Hemisphere.

Is most of the earth's surface land or water? About three fourths of the earth's surface is water; only about one fourth is land.

TOPICS FOR ORAL OR WRITTEN WORK.

(*Answer in Sentences.*)

I. THE EARTH. What is its shape? Why do you think so? How much of its surface is land, and how much water?

II. THE LAND. Name the continents. In which hemisphere is each?

III. THE WATER. Name the five oceans. Tell where each ocean is.

12. The Turning of the Earth.

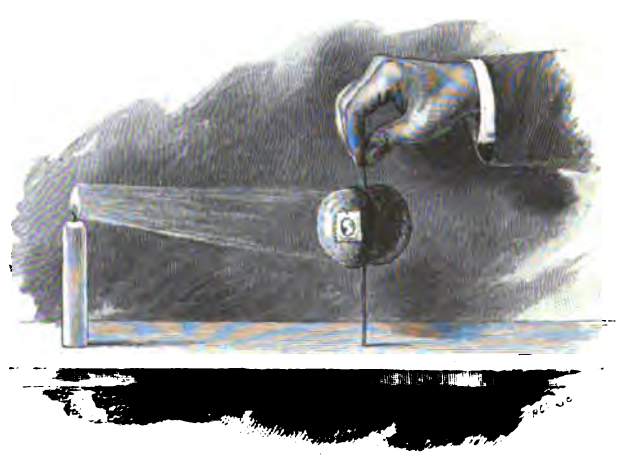
The great ball on which we live is always turning slowly around toward the east. This motion of the earth makes the sun *appear* to rise in the morning, to move westward across the sky during the day, and to set in the evening. It is really the earth that moves.

The turning of the earth once around in front of the sun makes day and night. We divide this time into twenty-four hours.

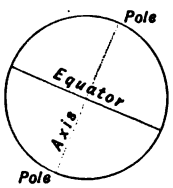
Get an apple and pretend it is the round earth. Pin a postage stamp near the middle of one side for America, and a larger piece of paper on the other side for Asia. Stick a straight wire or hat pin through the center of the apple from the stem, and hold it in front of the candle on the teacher's desk, as in the picture below. We will pretend that the candle is the sun. Now, twirl the pin so as to make the apple *turn slowly*. See how America and Asia are brought by this turning, first into the light, or day, and then into the shadow, or night, and then into the light again.

When it is day in America it is night in Asia. In about twelve hours, however, the earth will turn so far that Asia will be toward the sun, and America away from it. Will it then be day or night in Asia? In America?

Imagine a line passing through the center of the earth, from one side to the other, around which all parts of the earth move as it turns. We call this imaginary line the earth's *axis*. One end of the axis is at the most northern point of the earth, and is called the *north*



pole. The other end of the axis is at the most southern point, and is called the *south pole.*



Imagine a line passing around the earth just halfway between the poles. This line divides the earth into a northern and a southern hemisphere, and is called the *equator.* The equator extends exactly east and west.

TOPICS FOR ORAL OR WRITTEN WORK.

(*Tell about each Topic in Sentences.*)

I. THE MOTION OF THE EARTH. The direction in which it moves. The time which it takes to turn once. The divisions we make of that time.

II. THE RESULT OF THE EARTH'S MOTION. Apparent. Real.

III. LINES AND POINTS. The axis. The north pole. The south pole. The equator.

If desired, Latitude and Longitude (p. 139) *may be studied at this point.*

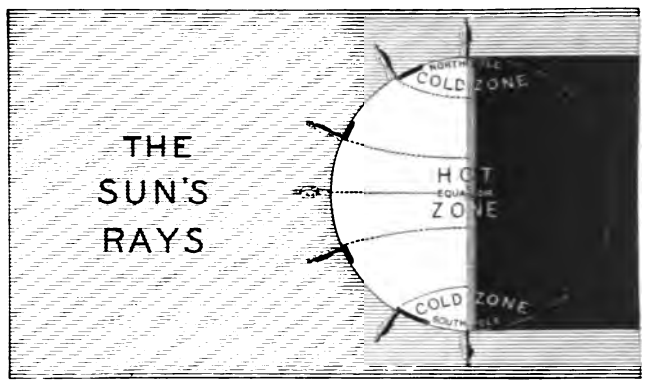
13. The Zones.

Why is it day with us during part of the time only? What, then, do we get from the sun? Is it generally warmer in the daytime or at night? Why? What, then, besides light do we get from the sun? Without the heat from the sun we should all freeze to death.

What part of the day is the hottest? Is the sun low down or high up in the sky during the middle of the day? Does the sun give us more heat when it is high up in the sky and nearly overhead, or when it is low down in the sky, as in the early morning and late afternoon?

Life in the frigid zone.

Look at the picture at the top of the next column; to which man does the sun seem to shine from directly overhead? On what part of the earth is that man standing? There is a broad *zone* or belt, midway between the poles, in some part of which the sun is always overhead at noon. In that zone the days and nights are each about twelve hours long; the weather is warm all the year; and where there

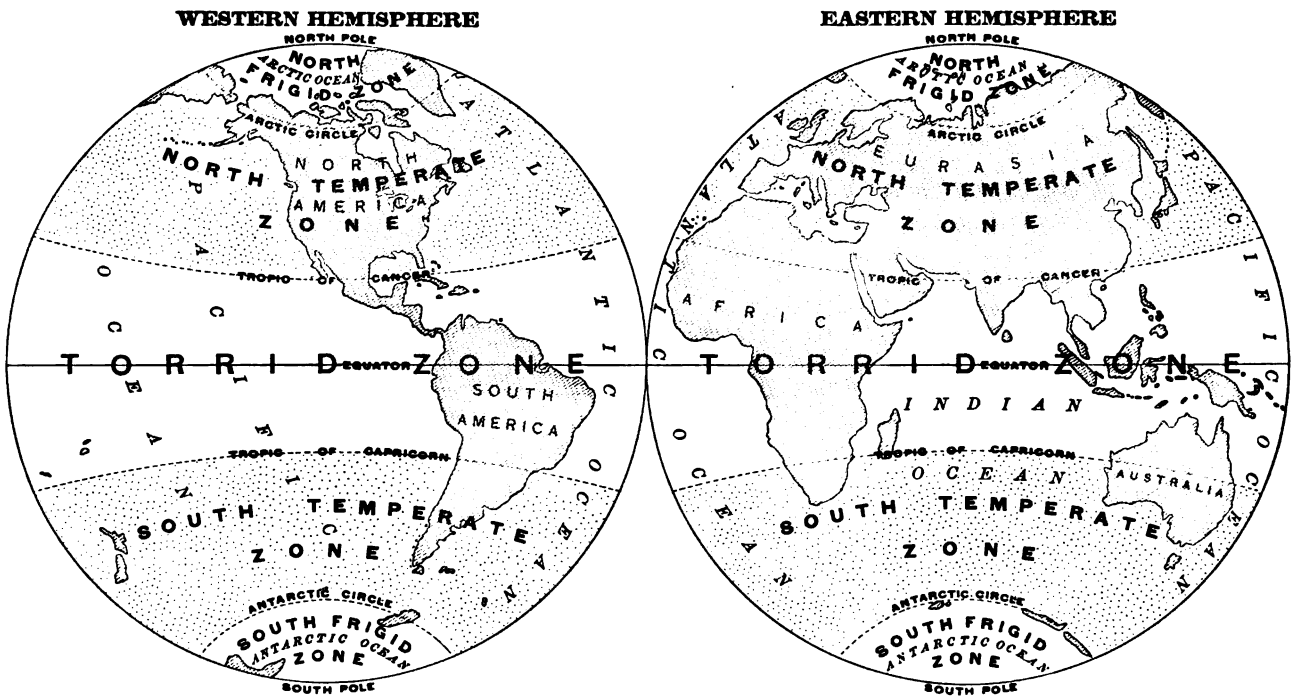


The sun's rays in the different zones.

is enough rain the trees and grass are always green. This belt is called the *hot* or *torrid zone.* Its width is about one fourth the distance on the earth's surface between the north pole and the south pole.

To which two men in the picture does the sun seem low down in the sky? In the parts of the earth near the poles the sun is never high in the sky, and in winter, in much of those regions, it does not rise at all for several weeks. In midsummer it does not set, but seems to circle around the sky just above the horizon. The winter is so long and cold, and the summer is so short, that no trees grow tall, and only a few kinds of plants live there. Those parts are called the *cold* or *frigid*

Life in the torrid zone.



zones. There is a north frigid zone around the north pole, and a south frigid zone around the south pole.

Between the hot and the cold zones the sun is never quite overhead, and the weather is neither so hot in summer as in the torrid zone, nor so cold in winter as in the frigid zone. There are two of these belts. One is called the *north temperate zone;* the other, the *south temperate zone.* Each of them is nearly as wide as the torrid zone.

In which zone is the sun always nearly overhead at noon? In which zones do shadows fall toward the north at noon? Can you tell why? In which zones do shadows fall toward the south at noon? Can you tell why?

In the temperate zones, spring, summer, autumn, and winter follow one after the other; but when it is winter in the north temperate zone, it is summer in the south temperate zone. In which season do most of the trees and plants begin to grow and put forth leaves and flowers? In which are they covered with leaves and fruit? When do they shed their leaves? When do they seem dead and bare? We live in the north temperate zone. When the trees are covered with fruit near our home, how do the trees look in the south temperate zone?

In summer the days are longer than the nights in the temperate and frigid zones, but in winter they are shorter. The nearer to the poles we get, the longer we find the days of summer and the nights of winter; until finally, at the poles themselves, we should find that daylight lasts all summer, and the darkness of night lasts nearly all winter.

What zone lies around the north pole? Around the south pole? Through which zone does the equator pass? Where is the north temperate zone? The south temperate zone? Name the five zones in order, beginning at the north.

What is the name of the line at the edge of the north frigid zone? Of the south frigid zone? At the north edge of the torrid zone? At the southern edge? Name these lines in order, beginning at the north.

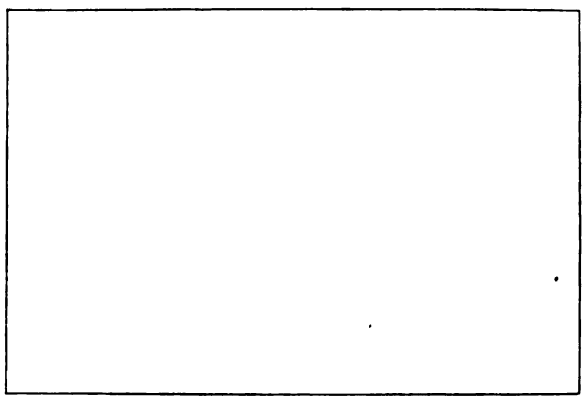
TOPICS FOR ORAL OR WRITTEN WORK.

(Tell about each Topic in Sentences.)

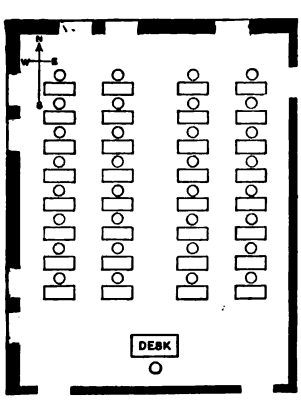
I. ZONES. What a zone is. Where each zone is.
II. LENGTH OF DAY AND NIGHT. In the torrid zone. In the frigid zones. In the temperate zones.
III. HEAT. Where heat comes from. Where the sun is when it gives us the most heat. Why the torrid zone is hot. Why the frigid zone is cold.

14. Map Reading.

Here is a drawing, or plan, of the floor of a room which is 24 feet long and 16 feet wide.



The right side of the plan represents the east side of the floor. The plan is just like the floor in shape, but much smaller. How many inches long is the plan? How many feet long is the floor? If 3 inches in the plan stands for 24 feet in the floor, what does 1 inch in the plan stand for? See if 1 inch in the width of the plan stands for 8 feet in the width of the floor. The plan is said to be drawn on a *scale of* 1 *inch to every* 8 *feet.*

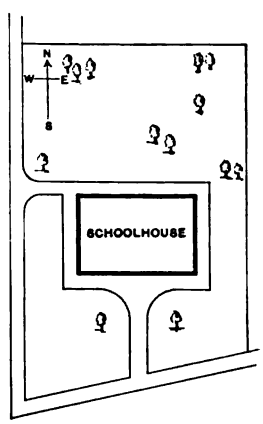


Plan of a schoolroom.

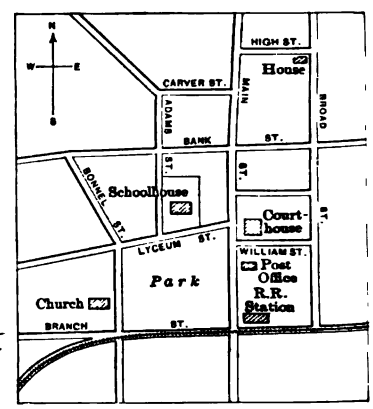
On the same scale, draw the floor plan of another room which is only half as large as the first; that is, 12 feet one way and 16 feet the other way. If you draw this plan correctly, you will find that it is just half as large as the first. If the plans are drawn on the same scale, you can tell by comparing them just how much larger one room is than the other; and if you know the scale on which the plan is drawn, you can tell from it the real size of the room.

Which is the east side of your schoolroom? How many feet long is the room? How many feet wide is it? Draw a plan of your schoolroom floor, making the right side of your plan represent the east side of the floor. Your teacher will help you to draw it to a scale. Show upon your plan the location of the doors, windows, desks, and other objects in your schoolroom.

How long is your school yard? How wide is it? In what part of it is the schoolhouse? Make a plan, or map, of the yard; show the location of the gate and of the schoolhouse.



Map of a school yard.



Map of a town.

In what direction does your schoolhouse front? On what street is it? In what direction does the street extend?

On what street is your home? In what direction is it from the schoolhouse? Make a map showing the location of the schoolhouse and of your home.

The pupils may help the teacher to make upon the blackboard a map showing the principal streets and buildings of the town. Each pupil may try to make such a map himself. Write the names of the different places on the map. Show on it which direction is east.

Two slopes which meet at their lower edges.

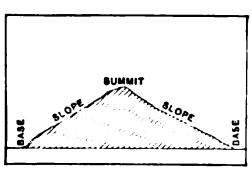
15. Field Work.

Arrangements should be made, whenever possible, to give the class the great benefit of lessons in the field.

Is the land about your schoolhouse level or sloping? In what direction does the land slope? Are the slopes gradual or steep? Are they called *hills?*

Point to the top, or *summit*, of a hill. Point to the foot, or *base*, of a hill. The sides of a hill are called its *slopes*. Sometimes there are two slopes, one on each side. Are the slopes just alike? Which is the longer? Which is the steeper? Are all the hills you have seen just alike?

Make in sand or clay a model of the hill which you have just been studying. Draw on the blackboard a *profile* or *section* of the hill, as in the picture, showing how steep the slopes are and which one is the longer. Write a description of the hill which you modeled.



Profile or section of a hill.

What becomes of rain water that falls on the land? How far down a slope will water run? What stops it? Above is a picture of two slopes which meet at their lower edges, forming a *valley*. Where the slopes meet thus we often find a *stream*. Examine a stream in your neighborhood. What is a stream? Is the stream straight or winding? Is it clear or muddy? What makes a stream muddy? Is this stream in a valley? How many slopes has the valley? Are all the streams that you have seen, in valleys? Model a valley in which a stream flows.

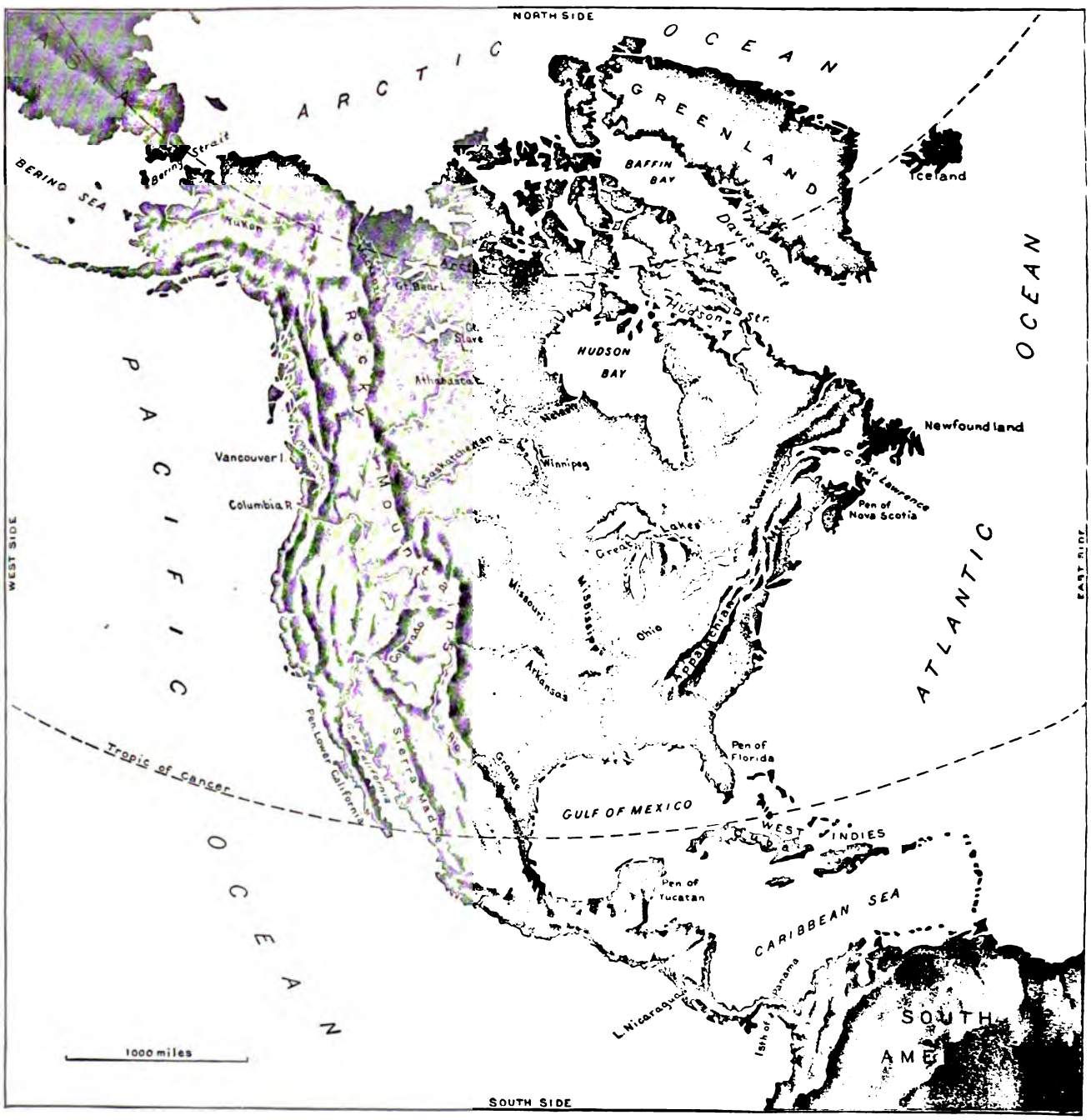
Examine the shore of a pond or lake. Some shores are steep and rocky; others are low and level. At some places on the *coast* or shore of the ocean the waves dash against the land, breaking off great pieces of rock and rolling them about until they are worn into sand, which is carried away by waves and currents. At other places the waves wash up the sand and spread it as a smooth and gently-sloping beach. So the edge of the land is constantly changing its shape, and is generally crooked.

How can you find the directions north, south, east, and west? It is also possible to find these directions at night by means of the stars. On a clear night, you may see a group of seven stars, as in the picture below. (What does the shape of the group remind you of?) The group of stars is called the Dipper. If you follow onward with your eye the line of the front side of the Dipper, you will see another bright star. This is called the North Star. *The earth's axis always points toward it.* The direction on the earth toward this star is north.

The group of stars is called the Dipper.

We may also find the north by means of a wonderful instrument called the *compass*. It is a little bar of magnetized steel balanced on a sharp point about which it can turn freely. When disturbed, this bar or needle swings to and fro, but always settles to rest with one of its ends pointing very nearly toward the north pole. When suitably mounted in a glass-covered box, this instrument is called the *mariner's compass*, because it is always used by mariners or sailors in guiding ships over the trackless ocean.

Mariner's compass.



NORTH AMERICA. (Same scale as the maps of South America, Eurasia, Africa, and Australia.)

NORTH AMERICA.

16. Position and Shape.

In what continent do we live? In what grand division of that continent? In a former lesson we studied a map of North and South America together; a larger map of North America by itself is shown on the opposite page.

What circle crosses the northern part of North America? What tropic crosses the southern part? Is North America, then, north or south of the equator? In what zones is it?

What ocean is north of North America? East? South and west? With what land is North America connected on the southeast? How? What land is shown in the northwest corner of the map? What strait separates North America from Asia? What is a strait?

Polar bears swim to the ice.

If you should sail west from North America across the Pacific, what continent would you reach? Which side of it? If you should sail east from North America across the Atlantic, what continent would you reach? On which side of it would you land?

How many sides has North America? Which side is longest? Which of the other two sides is the longer? Where is North America widest?

Is the coast line on any side of North America a straight line? Point to a place where the shore bends inward so far that a part of the water is almost shut in by the land. A body of water extending into the land from a larger body of water is called a *gulf*, *bay*, or *sea*.

What large bay in the northern part of North America? What strait connects it with the Atlantic Ocean? The strait and the bay were named after Captain Henry Hudson, who was one of the first white men to sail into them. While in this bay, his crew sailed away with the ship, and left Hudson and his son in a little boat to die from cold and hunger.

What strait and bay west of Greenland? Great blocks of ice, called *icebergs*, larger than the largest house, and vast fields of ice can be seen floating in these waters. Seals, walruses, and other animals that live in cold water often climb out upon the floating ice, and great white or polar bears sometimes swim to the ice to catch and eat these animals.

What gulf is in the extreme east of North America? The part of the ocean near the Gulf of St. Lawrence is one of the best places in the world for catching codfish and mackerel.

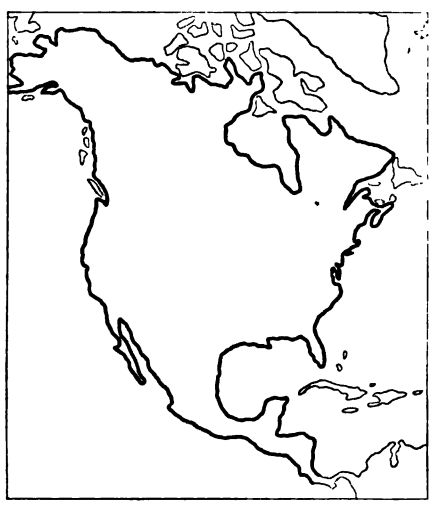
What large gulf is in the southern part of North America? What sea is north of the Isthmus of Panama? What long, narrow gulf is on the west coast of North America?

What sea is in the northwest, between North America and Asia? Most of the seals whose fur is made into sealskin muffs and jackets are killed in this sea. What strait connects this sea with the Arctic Ocean? What is a gulf, bay, or sea?

Find a place just south of the Gulf of St. Lawrence where a part of the mainland of

North America extends out into the Atlantic Ocean so as to be nearly surrounded by water. A portion of land thus extending from a larger body of land and nearly surrounded by water is called a *peninsula*, which means "almost an island." What is the name of this peninsula? The Acadians, about whom Longfellow wrote in the beautiful poem "Evangeline," lived in Nova Scotia.

What peninsula is between the Gulf of Mexico and the Atlantic Ocean? What peninsula is southeast of the Gulf of Mexico? What long, narrow peninsula is in the southwest of North America?



Draw an outline map of North America like the small one here given, but larger and without the islands. Compare it with this one, and find your errors. Practice sketching this map on the blackboard and on paper until you can draw in two minutes a good outline of North America.

17. Islands.

On which side of North America are most of the islands? Name the largest island north of North America. What island is east of Greenland? In what zones is Greenland? Most of this island is always deeply buried under snow. The first white men to visit it were sailors from Iceland. They found a little grass-covered slope, which they called Greenland; then this name was given to the whole island. Do you think the name suits it?

What island is east of the broadest part of North America? This island was visited by English sailors a few years after Columbus came to America. Icebergs from Greenland are often seen floating in the ocean as far south as Newfoundland.

What islands are east of the Gulf of Mexico? Columbus was the first white man who visited these islands. Until the time of Columbus few people believed the earth to be round, and no one knew of any Western Continent. When people went to Asia from Europe they traveled eastward, as we did in crossing the Eastern Continent. Columbus was sure that he could reach Asia quicker by sailing westward around the earth. When he landed on these islands he thought he had reached the Indies in Asia, so he called the people Indians, and afterwards the islands were called the West Indies. In what zone are most of these islands?

What island near the middle of the west coast of North America?

TOPICS FOR ORAL OR WRITTEN WORK.

I. Location of North America. Zones. Bordering oceans.

II. Shape. General shape. Comparison of three coast lines in length. Description of one coast line: general direction; indentations; projections; islands.

18. Mountains.

The map on p. 22 shows by the smooth and even shading where the surface of the land is smoothest and flattest, and by the broken and irregular shading where the surface is most broken into steep slopes.

In which part of North America does the surface seem most uneven? The whole western part of North America is broken by mountains.

Are the slopes of the hills which you have seen gentle, or steep? Are those hills as high as a church spire? Are they as high as the clouds? Some hills are so high that their tops are often hidden in the clouds. Such hills are always called *mountains*. But a mountain need not be as high as the clouds, for any hill that is quite steep and much higher than the surrounding country is likely to be called a mountain. Very many of the mountains in the western part of North America are so high

Sultan Peak, Rocky Mountains.

that their rocky tops are frequently hidden by the clouds.

Some hills stand by themselves and are surrounded, on all sides, by low land. In what directions does the ground slope away from the top of such a hill? More often, however, hills extend in long lines with slopes on but two sides, like the ridge of a roof. Such a line of hills is called a *ridge* or a *range;* and a number of neighboring ranges, extending in about the same direction, form a *chain* of hills or mountains.

Such a line of hills is called a ridge or a range.

In what direction do most of the ranges in western North America extend? What is the name of the longest mountain chain? These mountains extend nearly the whole length of North America. In the north they are always covered with snow, and even near their southern end, in the torrid zone, some of the higher points, or *peaks*, are snow-covered throughout the year; for the higher we go, the colder we find the air to be, so that even in the torrid zone, if the land is high enough, we find ice and snow.

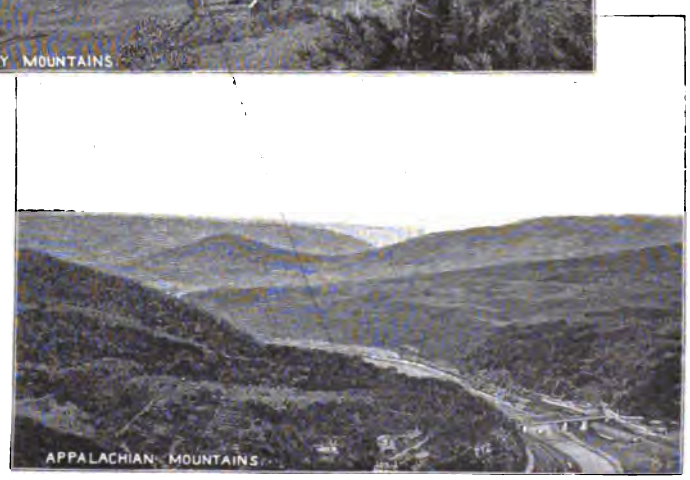
What two long ranges west of the Rocky Mountains? Between these ranges and the Rocky Mountains is a broad *highland.* It is crossed by short mountain ranges and deep narrow gorges, or *canyons.* This highland, with the mountain ranges on its borders, is much higher than any other part of North America, and is often called the *Rocky Mountain highland.*

Where this highland is widest, what part of the width of North America does it occupy?

Where does it cover almost the whole width of the continent?

What other mountains in North America? Near what ocean are they? Between what two gulfs and in what direction do they extend?

Which look higher and more rugged on the map — the Rocky Mountains, or the Appalachian? The Appalachian Mountains are much the lower. Their highest summits are scarcely as high as the flat country at the foot of the Rocky Mountains. They are not high enough to be covered with snow all the year, and few are so high and rocky that trees and grass cannot grow on their very tops. Thus the Appalachian Mountains, with their smooth, flat tops covered with trees, look very different from the higher mountains of the West, which are covered with trees only part way up their slopes, while their pointed and uneven tops, when not covered with snow or hidden by the clouds, are seen to be rugged crags of naked rock.



TOPICS FOR ORAL OR WRITTEN WORK.

I. Mountains. A mountain. A mountain range. A mountain chain.

II. Rocky Mountain Highland. Its location. Its direction. Its greatest width. Its borders.

III. Appalachian Mountains. Their location. Comparison with Rocky Mountains: in height; in appearance.

19. Plains.

In the map on p. 22 what part of North America seems smoothest and flattest? Is there a place near your home where the ground, for a great distance in every direction, is flat and nearly level? Such a place is called a *plain*.

The central part of North America is a vast plain. What mountains border this great central plain on the west? On the east? By what is it bordered on the north? On the south?

Did you walk uphill or downhill in coming to school this morning? Perhaps part of the way the ground was so nearly level that you could not tell whether it sloped up or down. If your path had been alongside of a stream of water, even though flowing in the gutter, you could have told which way the ground slopes. How does the flow of water show this?

Much of the great central plain of North America is so nearly level that you cannot see its slope. How can you tell which way it slopes? The *rivers*, or large streams, are shown on the map (p. 22) by white lines. You see that several of them flow from the Rocky Mountains or the Appalachian Mountains, across the plain to the sea. Notice these rivers, and tell which way the northern part of the plain slopes; the central part; the southern part.

Such a place is called a plain.

The part of the plain near the Rocky Mountains is higher than the tops of the Appalachian Mountains, and might be called a *plateau*, which is another name for a high and broken plain. The parts of the central plain near the Appalachian Mountains and between the Gulf of St. Lawrence and Hudson Bay are also low plateaus. These higher parts slope gradually down to the central part of the plain, which is a broad lowland.

East of the Appalachians is a small plain. What ocean borders it? Which way does this plain slope? It is called the *Atlantic coast plain.*

Part of the Atlantic coast plain.

Model North America, showing the Rocky Mountain highland, the Appalachians, and the central plain.

TOPICS FOR ORAL OR WRITTEN WORK.

I. PLAINS. A plain. A plateau.
II. GREAT CENTRAL PLAIN. Its location. Its borders. Its slopes. Its plateaus. Its lowlands.
III. ATLANTIC COAST PLAIN. Its location. Its slope.

20. Drainage.

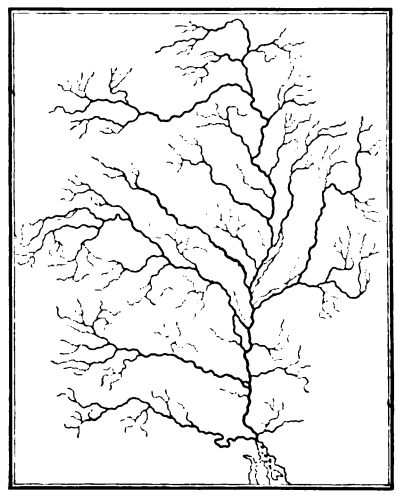
In what direction does the southern part of the central plain slope? What river shows this? It is the largest river of North America. Several large rivers flow into it and are called its *branches*. Any stream is a branch of the stream into which it flows. Name two branches of the Mississippi flowing from the west. In what direction, then, does the western part of the central plain slope? Name one eastern branch of the Mississippi. In what direction does the eastern part of the central plain slope?

Hold this book open as shown in the picture. So held, the book forms a little trough with two side slopes and a bottom slope. This is like the great trough in the land in which the Mississippi flows, except that the land is not so smooth and regular. What is such a trough in the land called?

How wide a valley have you seen in your walks? The Mississippi valley is hundreds of miles wide, and its side slopes are very gradual.

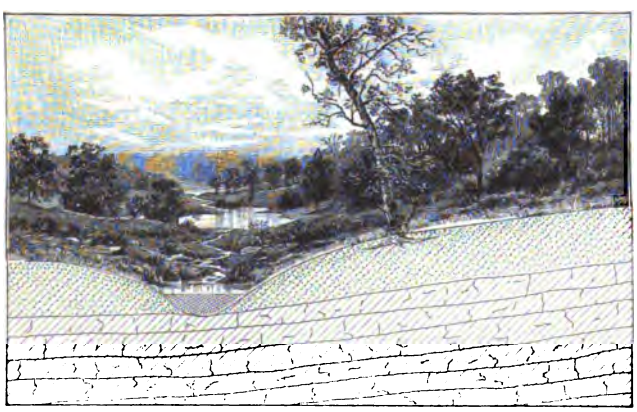
Let us travel up the Mississippi to the place where the Ohio joins it. This place is called the *mouth* of the Ohio. The place where any stream flows or empties into a larger stream

or other large body of water is the mouth of the stream. Point to the mouth of the Mississippi; of the Arkansas; of the Missouri. If we travel up the Ohio from its mouth, we shall pass the mouths of many streams, for the Ohio, like the Mississippi, has many branches, though they are not shown on the map. If we ascend these branches, we shall find that they, too, have smaller branches, and these have still smaller branches, until the streams are mere brooks or rills. A river, with all its branches, big and little, is called a river *system*.



A river system.

When rain falls, some of the water flows directly into the streams, but much of it sinks into the ground. The ground can hold much water. The water-soaked ground often rests upon a bed of rock or clay, so that the water cannot sink further, but trickles down until it reaches the surface and bubbles out as a *spring*, as shown in the picture below.



A section through a spring.

When you walk in the country, and come to a spring, you will know that the water bubbling out into the little pool fell as rain, perhaps weeks before, and has been flowing underground ever since. So springs may flow throughout dry seasons.

There are many such springs in the central plain, from each of which a little stream flows to join other streams and become part of the great Mississippi system. The place where a stream begins or rises is the *source* of the stream. It may be a spring, or a pond, or a marsh, or the melting snow and ice upon some mountain side. Point to the source of the Mississippi; of the Arkansas; of the Missouri.

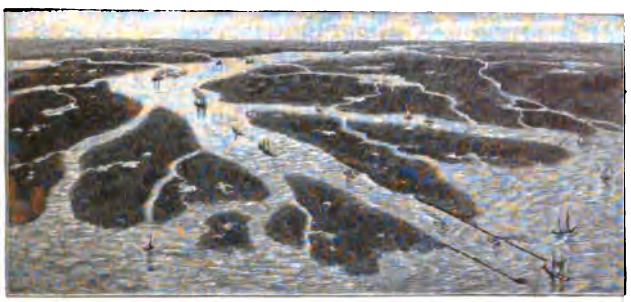
All the land sloping toward any stream of the Mississippi system is in the Mississippi valley or *basin*. A stream basin includes all the land drained by the stream and by any of its branches. Point out the basin of the river in the picture below. Draw your pencil around the basin of the Mississippi River. (Map, p. 22.)

In the lower part of the Mississippi River the water is muddy. Where do you think the mud comes from? Where does the mud in the gutters come from, on a rainy day?

Swift streams wash away particles of the land through which they flow. If the earth on a hillside is loosened in any way, the rain water will wash much of it down to the lower land. If this should go on long, what would happen to the hillside? Streams are always carrying loads of earth from the highlands, but

A river basin.

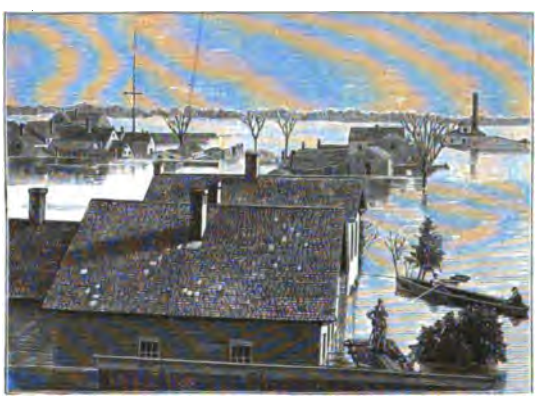
in the springtime they carry more than at other seasons. Why? The soil of many a fer-



A delta.

tile field west of the Appalachian Mountains is being washed down into the Ohio River.

The water in the lower Mississippi sometimes rises, so that it overflows the banks and covers the country on either side with a shallow expanse of muddy water. Put a lump of earth into a tumbler of water, stir the water until it is very muddy, and let it stand awhile. What happens to the earth when the water becomes still? When the water of the Mississippi spreads over its banks, it ceases to flow so fast, and drops part of its load of earth. The land on both sides of the lower Mississippi is covered many feet deep with soil left in this way by the river. The plain thus built up by the Mississippi is called its *alluvial* or *flood plain*. Nearly all rivers have flood plains formed in the same way. Such plains are generally very fertile.



A flood in the Ohio River.

Strong *levees*, or embankments, are built along the banks of the lower Mississippi to keep the water from overflowing and destroying the towns and farms on its flood plain.

The current of the Mississippi is checked as it flows into the Gulf of Mexico, and much of the earth in its muddy water settles to the bottom. The bottom at this place is thus gradually built up until a fan-shaped tract of low marshy land is formed, through which the river empties by several mouths. This tract of land is called a *delta*. It is constantly being built farther into the Gulf. Many other rivers build deltas at their mouths in this way.

Model North America; show the three slopes of the Mississippi basin.

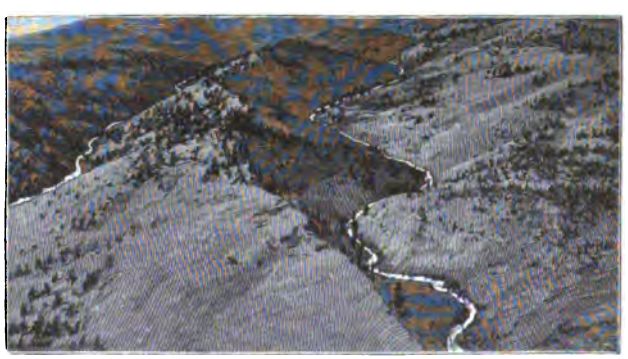
TOPICS FOR ORAL OR WRITTEN WORK.

I. Mississippi Basin. Location. Extent. Surface: its western side slope; its eastern side slope; its bottom slope.

II. Mississippi River. Source. Direction. Mouth. Principal branches. Flood plain. Delta: what it is; how it is made.

21. Drainage, *Concluded.*

Below is a picture of two stream basins, side by side. Point to the rim between them. If rain falls on this rim, which way will the water flow? The rim between two basins is called a *divide*. Why? A divide need not be very high, but it must be a little higher than the land on either side of it. Why?



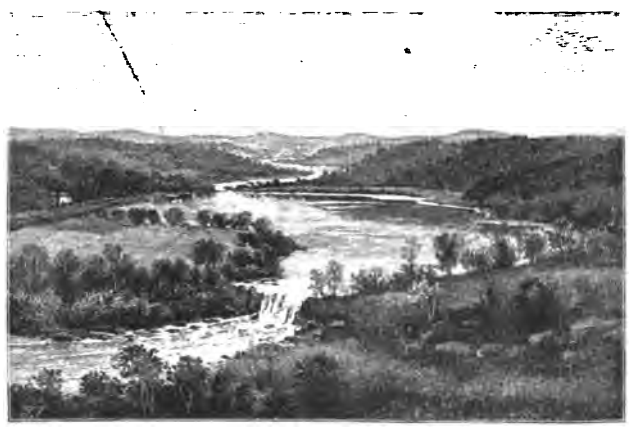
The rim between two basins is called a divide.

In what direction does the land north of the Mississippi basin slope? How do you know?

Point to the divide between the Mississippi basin and the basins north of it. This divide extends across the central plain, and it is not very high. In some places the ground slopes from it on either side so gradually that it seems to be perfectly level.

North of the Mississippi basin are the basins of several large rivers.

What river flows down the east slope of the Rocky Mountains toward Hudson Bay? There is a great dam or obstruction across the lower part of its valley. When a river meets such an obstruction, it spreads out and must fill the hollow before it can flow over the dam and continue its course. The pool of still water above the dam is called a *lake*. How big a lake have you seen? The lake in the Saskatchewan basin is so big that at the widest part you cannot see across from one shore to the other. What is its name? What river flows into it? A river which flows into a lake is called an *inlet*. What river flows out of Lake Winnipeg? The river flowing out of a lake is called its *outlet*. A lake may have many inlets; but it seldom has more than one outlet.



The pool of still water is a lake.

What river flows down the east slope of the Rocky Mountains into the great central plain and then northward to the Arctic Ocean? What three lakes are in its basin? There are thousands of lakes in this part of the central plain, but only the largest are shown on the map. Point to the divide between the Saskatchewan and the Mackenzie basins.

What three great river basins have you found in North America which extend as far west as the Rocky Mountain highland? What other river basin slopes from this highland to the Gulf of Mexico? Which is the only great basin in the central plain that does not extend so far west as the Rocky Mountain highland? Draw a line around the St. Lawrence basin. What lakes are included in it? These are called the Great Lakes because of their great size. One of them is the largest fresh-water lake in the world.

Toward what oceans do all the great basins we have studied slope? Toward what ocean and from what mountains do all the other great basins of North America slope? So the Rocky Mountain highland divides North America into two great slopes, a slope toward the Pacific on one side, and a slope toward the Arctic and Atlantic on the other side. This great divide between the eastern and western slopes of North America is called the *continental divide*. For much of its length it lies along the top of the Rocky Mountains.

What is the most northern river of the Pacific slope? Into what sea does it flow? What river flows directly into the Pacific? Into what gulf does the Colorado flow?

Sketch North America, and show the principal rivers.

TOPICS FOR ORAL OR WRITTEN WORK.

I. DIVIDES. Definition. Continental divide: position; comparison of the slopes into which it divides North America, — in direction, in size.

II. SLOPES. Rivers in the Atlantic slope. In the Arctic slope. In the Pacific slope.

22. People and Subdivisions.

The map on the next page shows, by means of the little dots, the parts of North America in which most of the people live. In the parts where the dots are closest together the number of people is greatest, but in the places where there are few or no dots very few people live.

It will be seen that most of the people of North America live in two great groups. Where is one group? Where is the other? Hardly any one lives in the cold, northern part of America, and few people live in the Rocky Mountain highland, except in the south.

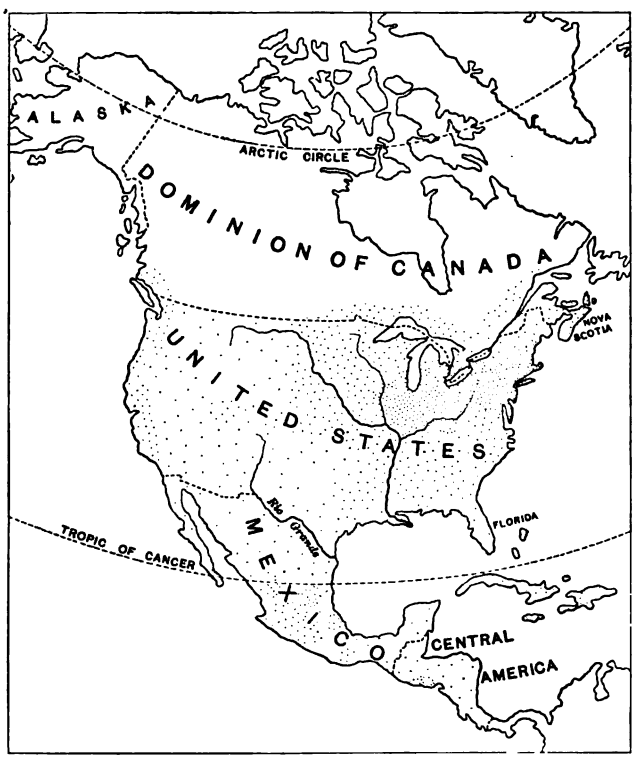
Because Englishmen discovered and named Newfoundland, the English people claimed nearly the whole of North America, and England owns the northern part to this day. That part is called the Dominion of Canada. Find it on the map.

The English once owned the eastern part of North America, south of Canada, and many people came from England to live there. By and by these settlers rose against the King of England, and took the country south of Canada for their own. They named this country the United States. Since then other regions have been added to it, so that it now extends across North America from the Atlantic to the Pacific Ocean, and is one of the richest and greatest countries in the world. It is the country in which we live. Find it on the map. Find Alaska on the map. It belongs to the United States.

As Canada belongs to England, and as most of the white people who first settled in the United States came from England, the English language is spoken by most of the people in these countries.

The part of North America west of the Gulf of Mexico and the Caribbean Sea was settled by white men who followed Columbus to America from Spain. Most of the people living there still speak the Spanish language and might not understand us if we talked to them in English.

For a long time the King of Spain made laws for these countries and claimed to own them, but at last his soldiers were driven away by the Spanish settlers, who now own the countries and make laws for themselves.



People are most numerous where the dots are thickest.

The country west of the Gulf of Mexico is called Mexico, while the narrow strip of land between Mexico and South America is called Central America. Why?

Find Mexico on the map. Find Central America. What language is spoken in these countries? What language is spoken by most of the other people in North America? What, then, is one important difference between the two great groups of people in North America? The Rio Grande may be said to separate the English-speaking from the Spanish-speaking people of North America.

Sketch a map of North America; show where most of the people live, and mark the boundary line between the English-speaking and the Spanish-speaking peoples.

TOPICS FOR ORAL OR WRITTEN WORK.

I. PEOPLE OF NORTH AMERICA. In what parts most of the people live. How they are divided according to their language.

II. ENGLISH NORTH AMERICA. Countries. To whom each belongs.

III. SPANISH NORTH AMERICA. Countries.

THE UNITED STATES.

23. Historical.

What peninsula in Canada just northeast of the United States? What peninsula in the southeastern part of the United States? What plain extends between these two peninsulas? In what country does this plain lie?

The landing of the Pilgrims.

When the first Englishmen came to America to live, they found the country covered with forests and inhabited by Indians. The early settlers came in parties, and had permission from the King of England to settle in America. One of the first parties was led by Captain John Smith, who wrote the first stories about the Indian girl Pocahontas. To another place came the Pilgrims, and with them Miles Standish and John Alden, of whom Longfellow has written. In time there were thirteen English *colonies*, or groups of settlements, lying side by side and including almost the entire east coast of America between Nova Scotia and Florida.

These colonies were governed by officers sent over by the king. But some of the laws made by the king and his officers were so unjust that the settlers at last refused to obey them, and when the king sent soldiers to enforce the laws, the colonists united to fight the soldiers. Then followed the Revolutionary War, in which the united colonists under General Washington drove the king's soldiers away and forced the king to permit the colonists to govern themselves.

A body of people that makes its own laws and governs itself may be called a *state;* so each colony now called itself a state and decided to choose its own officers and to make its own laws.

As the colonists by uniting had been strong enough to drive away the king's soldiers, it was decided that the states should unite to form a strong nation, which was called the *United States.*

The lawmakers of this nation are chosen by the people of the various states. A government like that of the United States, in which the people choose their own officers, is called a *republic.*

What mountain system is west of the Atlantic coast plain? What river valley occupies the central part of the United States?

Most of the colonists lived east of the Appalachians, while Indians lived west of the mountains, but the King of England gave up to the United States all the land between the ocean and the Mississippi River.

The states could not agree upon a division among themselves of the unsettled western region; so it was held by the United States as *public land.* When enough people settled in any part of this public land, that part was separated from the rest and admitted into the Union as a new state. This plan was followed not only with the public land east of the Mississippi River, but also with the wide region between the Mississippi and the Pacific Ocean, which the United States afterwards obtained.

Thus, as the public land has been gradually settled, state after state has been formed from it and admitted into the Union, until now, instead of thirteen, the United States contains forty-five states, besides five *territories* or divisions of the public land which have not yet enough people to be admitted into the Union as states.

Every year or every two years the people of each state choose men who meet in the capital city of the state, to make laws concerning state matters. The chief officer of a state is called the *governor*. He lives at the capital and sees that the laws are carried out. What is the capital of your state? Who goes from your district to help make the laws?

The states, however, are joined in the great nation of the United States, and each of them chooses men who go every winter to Washington, the capital of the nation, to help make laws on matters of interest to all the states. The chief officer of the nation is chosen every four years, and is called the *president*. He lives at the national capital. Who is now the president?

Sketch North America; locate the United States, and the group of the original thirteen states.

TOPICS ON HISTORY OF THE UNITED STATES.

I. GROWTH. Number of original states. Location. Present extent of the United States. Present number of states. Why there will probably be more states.

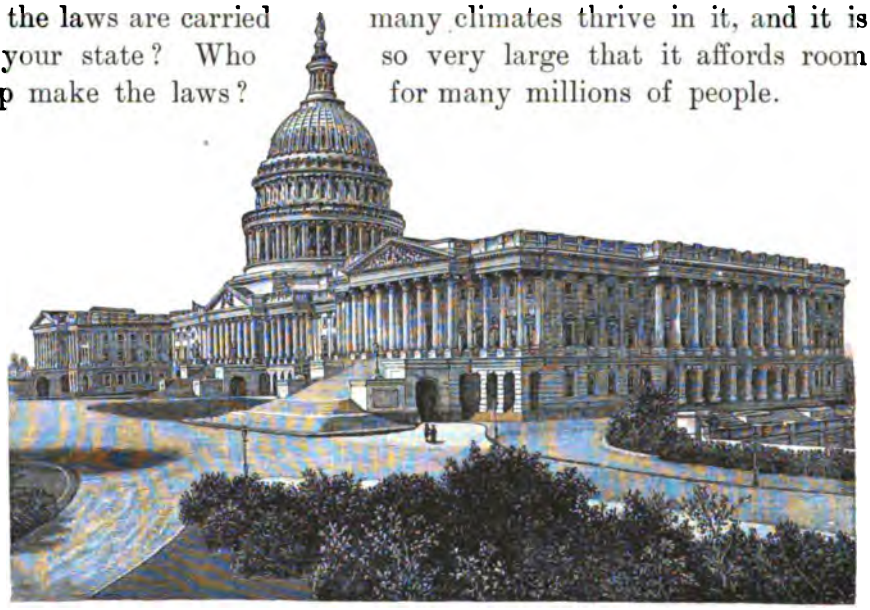
II. GOVERNMENT. Definition of a state. The United States: its formation; its government.

24. Position and Coast Line.

Mexico and South America were settled before the United States, and Canada was settled at about the same time, yet the United States grew to be the most flourishing part of America. It has more people and greater wealth than all the other countries of the continent together.

This is partly because of the character of the people who settled in the United States, and partly because of the favorable position of the country. The United States is neither too cold for the growth of food plants, as much of Canada is, nor too warm for people to work comfortably, as the lowlands of Mexico are.

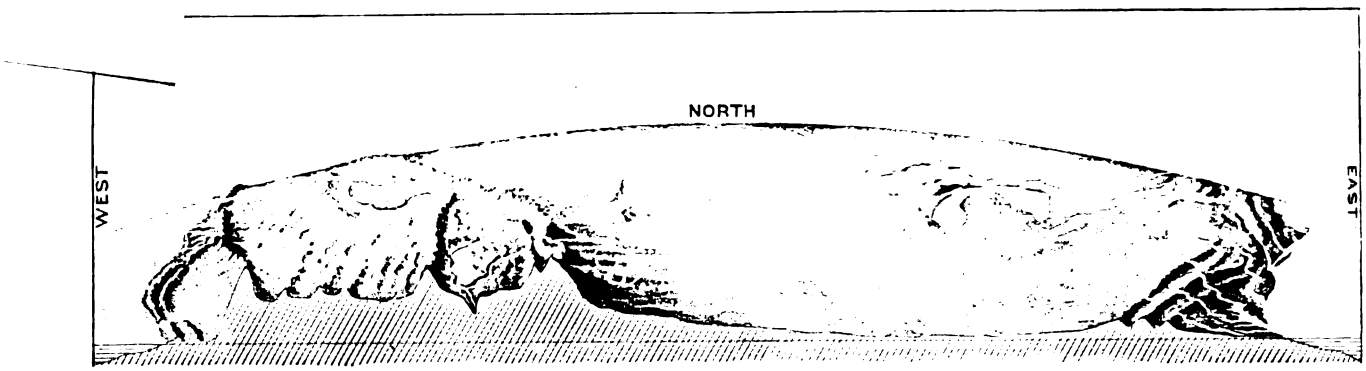
Our country is so wide from north to south that the plants and animals of many climates thrive in it, and it is so very large that it affords room for many millions of people.



The Capitol at Washington.

It is well situated for the exchange of goods with other parts of the world. Such trade is called *foreign commerce*. With Canada and Mexico we trade across the border, and with the West Indies, by ships. Across what ocean do we trade with Europe? Across what ocean do we trade with Asia and Australia?

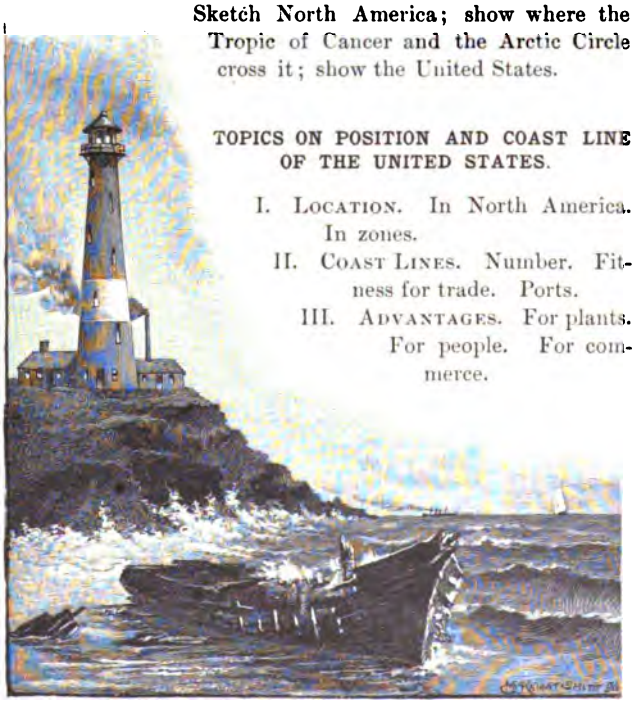
From which ocean do most bays indent our coast line? (See map, pp. 36, 37.) Bays are likely to contain sheltered places, or *harbors*, where ships may anchor. Since ships can be safely loaded and unloaded in these harbors, cities called *ports* are often built near them. Find three bays on the eastern coast with seaports on them. These bays contain good harbors.



Section across the United States, and a bird's-eye view northward.

Find one bay with a good harbor on our western coast. Find two bays on our southern coast.

Wherever you find indentations in the coast, you also find between them points of land extending into the water. These points are called *capes*, or *headlands*, for *cape* means "head." Lighthouses are often built on capes to warn sailors at night not to sail their ships against the shore, and so wreck them. What cape is near Massachusetts Bay? Find Cape May; Cape Hatteras. Name two capes in Florida. Name two capes on the Pacific coast of the United States.



A lighthouse.

Sketch North America; show where the Tropic of Cancer and the Arctic Circle cross it; show the United States.

TOPICS ON POSITION AND COAST LINE OF THE UNITED STATES.

I. Location. In North America. In zones.

II. Coast Lines. Number. Fitness for trade. Ports.

III. Advantages. For plants. For people. For commerce.

25. Relief.

Imagine that an immense knife has cut our country across the middle from east to west, and that the picture above represents the part stretching northward from the cut edge.

On the west the waves of the Pacific Ocean beat upon a coast which rises abruptly from the sea. On the east the Atlantic washes a gently sloping, sandy coast, a long distance from the foot of the mountains.

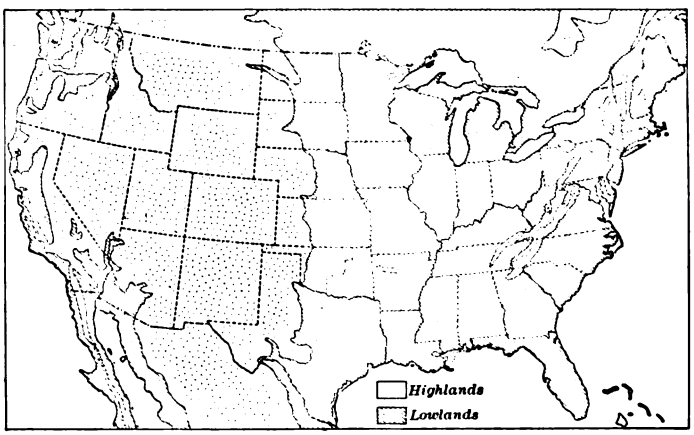
Which side of the country is highland? Which side is lowland? Point to valleys in the western highland. Are these valleys really low? Point to the tops of the Appalachian Mountains. Are these ridges really very high?

What part of the width of the country does the western highland include? You see that for some distance east of the Rocky Mountains the central plain is highland, but the east half of the country is mostly lowland.

The early white settlers made their homes in the Atlantic coast plain. In the south this plain is wide, and its shore is low and sandy, but in the north it is narrow, with a rocky coast north of Cape Cod. What states have rocky coasts? (See map, p. 37.) What states have sandy coasts?

The Appalachian Mountains are higher in the south than in the north. In the states of Pennsylvania, Virginia, and Tennessee they lie in parallel ridges, with valleys between. In what direction do these ridges extend?

Steep hillsides are not so good for farming as gently sloping plains, because the rain quickly washes away the plowed soil. Then, too, it is hard to travel over mountains. For these and other reasons the early settlers remained east of the Appalachian Mountains for some time. But, after a while, they crossed the mountains and made homes in the eastern part of the central plain. What states are crossed by these mountains?



Highlands and lowlands of the United States.

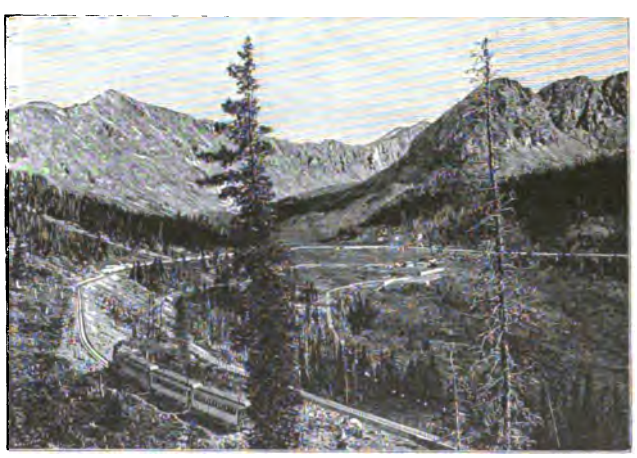
The central plain slopes gently on either side toward the Mississippi River. It slopes also from north to south. Hold your book open to illustrate these slopes. However, the central plain is not so flat as the sides of your book. It contains many hills and valleys. But, just as your garden looks flat from your window, though an ant crawling through it finds it quite rough, so to a bird high in the air this part of our country would look like a smooth plain.

There are forests in the north, east, and south of the central plain, but the western part is treeless, and the central portion consists of open, grassy plains or *prairies*.

What states are in the eastern part of the central plain, north of the Ohio River? South of the Ohio? What states border the Mississippi River on the west? What states lie west of these in the high plains east of the Rocky Mountains?

The western highland consists of a plateau inclosed by two mountain chains. What is the name of the eastern chain? What states does it cross? What are the names of the western chain? What states does it cross? What states are between these two chains? *Sierra* is a Spanish word meaning "saw." Because the tops of many mountains are notched like a saw, the Spaniards call mountain ranges *Sierras*.

Before the central plain was fully settled, gold was discovered in California, and thousands of white men took the long journey across the mountains to get rich by digging gold. They went on horseback and in wagon trains, climbing the mountains, crossing the plateau, and descending to the Pacific coast. The journey lasted several months, and many were killed by the Indians or died of hunger and thirst on the way. Several railways now cross the highland, and the journey can be made in a few days.



Railroad across the Rocky Mountains.

Sketch North America; show the United States and locate its western and its eastern highlands.

TOPICS ON RELIEF OF THE UNITED STATES.

I. Western Highland. Comparative width. Comparative height. Borders. Inclosed plateau.
II. Central Plain. Comparative width. Slopes.
III. Eastern Highland. Comparative width. Comparative height: north; south. Ridges. Valleys.

26. Drainage.

Why is the United States well situated for foreign commerce? This map shows that it is also well fitted for *domestic commerce*, or trade within the country. Steamers go from port to port along the seacoasts and the coasts of the Great Lakes. The central plain is crossed by many deep, broad rivers, on which goods can be carried, and the building of railroads is easy on its level surface.

The many rapids and waterfalls in the streams, by furnishing power to turn machinery, have opened the way to manufacture, thus enabling us to prepare goods for market. An iron bar weighs less than the ore from which it is made, and is easier to carry to market; a plank is less cumbrous than the log from which it is cut; and it is easier to export hams than hogs, or than the corn which is fed to hogs. Much manufacturing is now done by means of steam power, but the power of water was at first, and still is, very useful.

Through the central plain flows one of the largest river systems in the world, and on its waters the products of Minnesota, or Nebraska, or Pennsylvania, can float down to New Orleans and the Gulf of Mexico. Name three western branches of the Mississippi. What states does each cross or border? The Mississippi, measured up its Missouri branch, is the longest stream in the world. What is the eastern branch of the Mississippi?

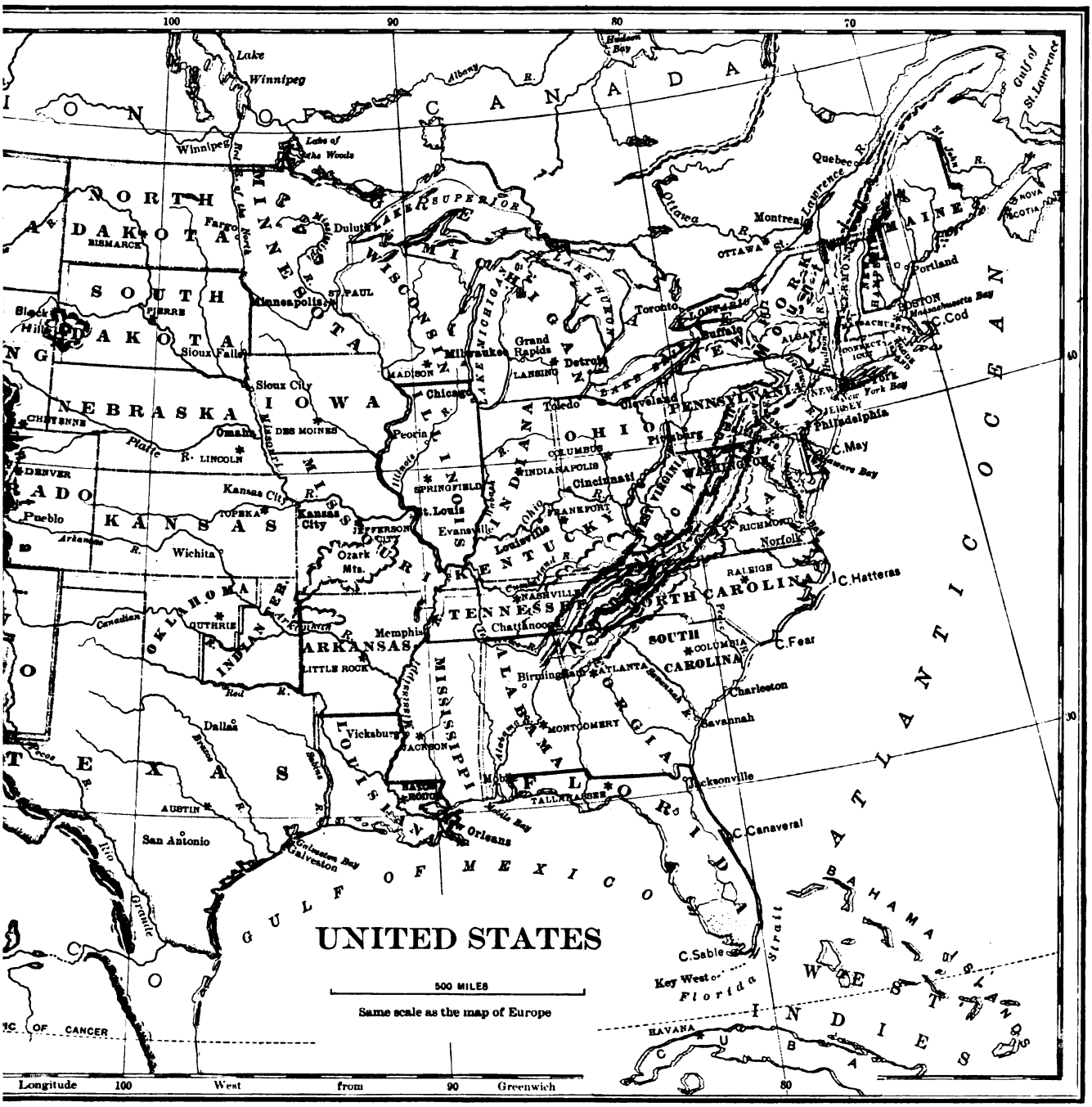
Follow the course of a steamboat from New Orleans to Nashville, in Tennessee; from New Orleans to Chattanooga, also in Tennessee. Each of these cities is on a branch of a branch of the great river. What are the two southern branches of the Ohio? Through what states do they flow? What branch of the Ohio flows between Indiana and Illinois?

Name the five Great Lakes. To what river system do they belong? What states are partly bordered by the lakes?

Some portions of the southern part of the central plain are drained by short rivers into the Gulf of Mexico. Name two of these rivers. What states are partly drained in this way?

What river flows northward into Lake Winnipeg? Where do these waters finally go?

Mark on the map the divide between the



rivers flowing into the Atlantic and those of the St. Lawrence and Mississippi basins.

In the south, the Atlantic rivers rise on the east side of the mountains. Name two such rivers.

In the north, many of the Atlantic rivers rise west of the mountains and flow across the ranges in narrow gorges, or *water gaps*, cut by running water. What river flows into the head of Chesapeake Bay? Into Delaware Bay? Do these rivers rise east or west of the mountains? Through the water gaps in the mountains the early settlers went to the plains beyond, and many of these gaps are very useful

now, affording low routes for roads, railroads, and canals across the mountains.

Where is the Hudson River? It is the most important river of the Atlantic slope, because its valley affords the lowest trade route across the Appalachian Mountains. The Erie Canal connects this river with Lake Erie, and several railroads have been built through the low, narrow valley. Because of this low trade route, and because of the excellent harbor at the mouth of the Hudson, the city at the mouth of that river has grown to be the largest city in America. What is the name of the city?

What two rivers flow from the Rocky Mountains to the Pacific Ocean?

Which of these rivers flows into the Gulf of California? It is formed by the melting snows on the Rocky Mountains, and is constantly cutting its bed deeper and deeper; but as scarcely any rain falls in that region, very little earth is washed into the river from the sides of its valley. So its valley has become a deep and narrow gorge, or canyon, through which the river rushes in a succession of falls and rapids. The sides of the canyon are so steep that for many miles a man cannot get down to the river. Is the river of value to commerce?

Steamboats sail on the Columbia River both below and above the rapids where it flows through the Cascade Mountains. What large branch has the Columbia? Through and between what states does it flow? The Snake River, like the Colorado, flows in a canyon.

The plateau between the Wasatch Mountains and the Sierra Nevada, and between the Snake and the Colorado basins, is called the Great Basin. None of the streams in this region reach the sea. Some of them flow into lakes which have no outlet, and others sink into the hot sands, and dry up. Lakes which have no outlet are generally salt. Name the largest lake in the Great Basin. Its water is so salt that fish cannot live in it.

Sketch North America; mark off the United States and show the Mississippi, the Missouri, the Ohio, the St. Lawrence, the Columbia, and the Colorado rivers.

TOPICS ON DRAINAGE OF THE UNITED STATES.

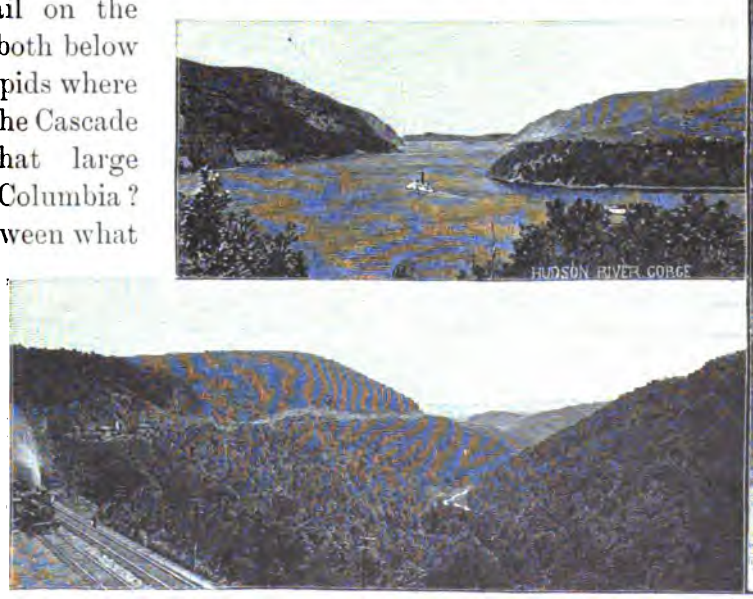
I. CENTRAL PLAIN. The Mississippi River: source; branches; banks; mouth. St. Lawrence system. Smaller systems.

II. WESTERN REGION. Columbia system. Colorado system. Great Basin.

III. ATLANTIC COAST. Northern streams. Southern streams.

27. Heat and Rainfall.

The United States is so wide from north to south that there is a great difference between its northern and southern parts at the same season.



A trade route across the Appalachian Mountains.

Colorado Canyon.

The first picture below is a scene in the northern part of our country in December. What is on the ground? The trees cast very little shadow, for all their summer foliage is gone.

The second picture shows a winter scene in the southern part of our land. The palmetto trees and other heat-loving plants are all in full leaf. You notice that the old lady has on no cloak or bonnet, even though it is winter time, for in the southern part of our country the weather is never very cold. The children of the South know nothing of sledding, for even if a little snow falls, it quickly melts in that warm land.

Winter in the North.

Winter in the South.

How do you keep the grass on the lawn fresh and green in the summer? What else, then, besides warmth do plants need to make them grow? How are the fields and forests watered? It is only where enough rain falls to make plants grow, or where they can be watered by some other means, that farming can be carried on.

Where does the rain come from? Who can tell how the water gets into the clouds? Why are clothes, after being washed, hung in the air? Where does their moisture go? It passes away in particles so tiny that they cannot be seen, and so light that *they rise into the air*. Water in this form is called *vapor*. Vapor is rising into the air nearly all the time from every damp object, and from the surface of every pond and stream, but, most of all, from the vast surface of the sea. Although sea water is salt and bitter, the vapor that rises from it is fresh and pure, all the salt being left in the sea. When the vapor mingles with the air, the winds carry it about, and thus much of the vapor from the sea is brought over the land. The air always contains some vapor, generally a great deal.

Although vapor is invisible, yet it is easily changed back again into drops of water big enough to be seen. Fill a tumbler with ice water. What happens to the outside of it? The water did not come through the glass. Where, then, did it come from? Cold air cannot hold so much vapor as warm air, so when air is chilled it is apt to drop some of its vapor on the nearest object. When the air was chilled against the cold glass, some of its tiny vapor-drops floated together and appeared as the little drops of water on the outside of the tumbler.

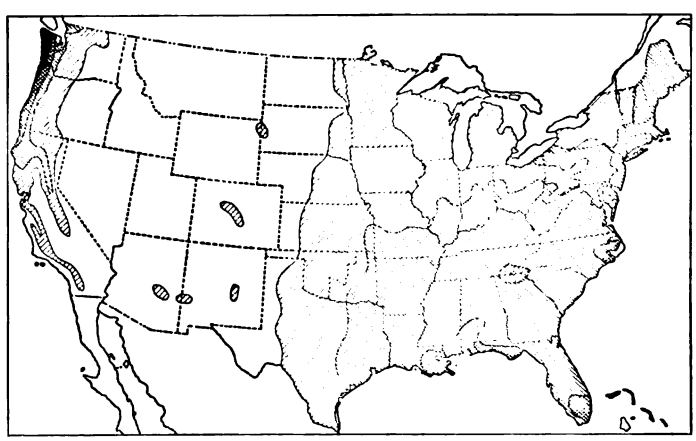
The air above the sea is loaded with vapor, and it blows about as wind. When it reaches a colder region, part of the vapor is changed into countless tiny water drops, or ice crystals. These float in the air and form clouds, or unite to make larger drops or flakes, which fall to the ground as *rain* or *snow*. Thus the rain comes from the clouds, the clouds come from the vapor in the chilled air, and vapor in the

air comes mostly from the sea. Now, where do you think the rain really comes from?

The shaded part of this map shows where enough rain falls in the United States to make farming most successful.

Most of the winds blowing over the United States come from the southwest and south. Where, then, do the winds that blow over the western half of the country get their moisture? They are so chilled in crossing the lofty Cascade Mountains and the Sierra Nevada that most of their moisture falls as rain or snow on the western slopes of the mountains. In the greater part of these western valleys there is enough rain for grain and fruit.

The winds from the Pacific, which lose their moisture in crossing the ranges near the coast, sweep over the western plateaus as dry winds. It is only when they cross some very high range that they are sufficiently chilled to give up a little more moisture as rain or snow. What very high range do they meet? Much of the western highland and of the western part of the central plain is so dry that few trees and food plants thrive there. Can you tell why these regions are dry? They are called the *arid* regions. Regions so dry that few or no plants can grow are called *deserts*.



The shading shows where there is enough rain for successful farming.

Remembering that the winds generally blow from the south and southwest, tell where the rain comes from that falls on the eastern half of the United States. This lowland region is one of the best farming regions in the world. Much rain falls along the Gulf coast. Further north, the clouds having dropped part of their moisture, less rain falls.

In what two regions of our country does much rain fall? In what region does little or no rain fall? What regions are best for farming? Why? From the map on p. 31 tell in what two regions of the United States most of the people live. Why? From the map on p. 35 tell in what states the highland region of the west sinks into the eastern lowlands of this country. There is no abrupt hill along this line; the land slopes so gradually that you cannot tell just where the lowland ends and the plateau region begins. Yet, by comparing these three maps, you can see what an important division there is, for the lowland portion of the country is well watered, fertile, and thickly peopled, while the highland portion is dry, and therefore unproductive and thinly peopled.

TOPICS ON CLIMATE.

I. A DROP OF WATER. Its home. How it got into the air. Where it traveled. How it became visible. In what form it fell to the earth. How it traveled back to the sea.

II. CHANGES IN TEMPERATURE. In the North. In the South.

III. RAINFALL AND ITS EFFECTS. On the eastern lowland. On the western highland. On the Pacific coast.

28. Sections of the United States.

Mention some of the occupations in the neighborhood of your home. What things grown or made in your neighborhood are sent elsewhere to be sold? Mention anything used in your home which is not made or grown in your neighborhood, but is brought from some other part of the world. Some occupations, then, are not followed in your part of the country.

What is the *chief* occupation in the neighborhood of your home? What is the chief thing sold there? There are several great regions of our country, in each of which the climate or the soil, or the character of the people, makes it possible to do some one kind of work better and more easily than any other. That kind of work is likely to be the chief occupation of that region. Each of these regions is made up of several states.

COTTON FACTORY.

HYDRAULIC GOLD MINING.

We have seen that the United States may be divided into the moist eastern lowland, the dry western highland, and the moist Pacific coast region. Farming may be carried on in nearly all parts of the moist eastern lowland, but in the warm southern part cotton is the chief crop, while in the north wheat and other food plants are the most valuable products. In the extreme northeast the surface is rough, and much of the soil is not fertile, so that farming is of less importance than manufacturing.

Hence we may study the United States in five great sections, as shown by the red border lines on the map, pp. 36, 37: —

1. The Northern, or food-producing, Section;

2. The Northeastern Section, where manufacturing is the chief industry;

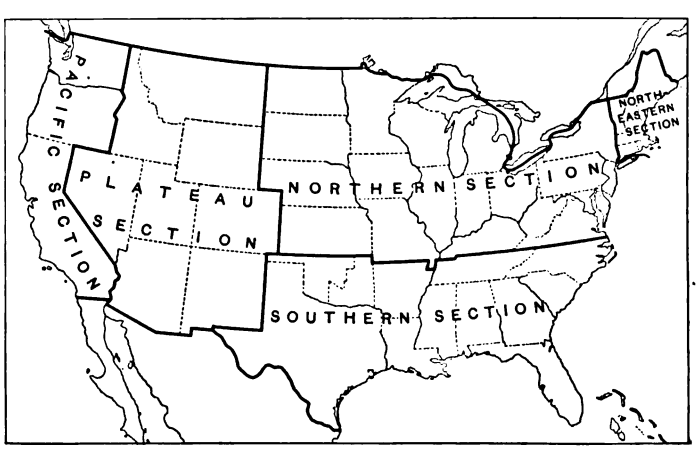
3. The Southern, or cotton-growing, Section;

4. The western Plateau Section, noted for grazing and the mining of gold and silver;

5. The Pacific Section, or western farming region.

As the various parts of the country were settled, towns were built in which were located stores, shops, and factories or mills. The capital of each state was generally placed where people could get to it conveniently from all parts of the state; but commercial towns usually grew up at points convenient for manufacturing or for trade with other parts of the country, — at the good harbors or on rivers where ships could approach, or near a mine or at a waterfall. Some cities, however, have none of these *natural* advantages, but are at the junction of two or more railroads.

There are about as many miles of railway in the United States as in all the rest of the world. In the Northern and Northeastern sections there are very few towns that are not on a railway or within easy drive of one. In the South and West also there are many railways, though not so many as in the North and Northeast. Several railways cross the entire country from the Atlantic to the Pacific.



29. The Northern Section — Products.

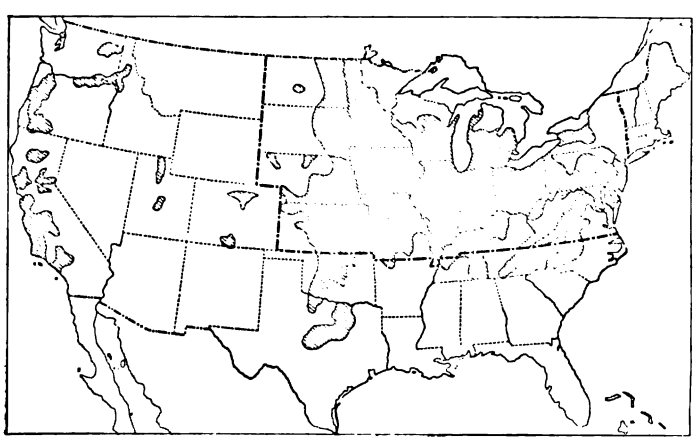
Which five states of this section border on the Atlantic Ocean? Tell the capital of each. (Each capital is marked on the map thus: *, and is named in capital letters.) Which border on the Great Lakes? What are their capitals? Which lie partly in the Ohio basin? What are their capitals? Which lie west of the Mississippi? Name their capitals.

The states of this section are often considered in two groups: those in the Appalachian Mountains and the coast plain are then called Middle States, and those west of the mountains, Central States. We study these states as a single group because the climate and the soil in all of them are so well adapted to the growth of wheat, corn, and other food products that this group as a whole forms the great food-producing region of the United States.

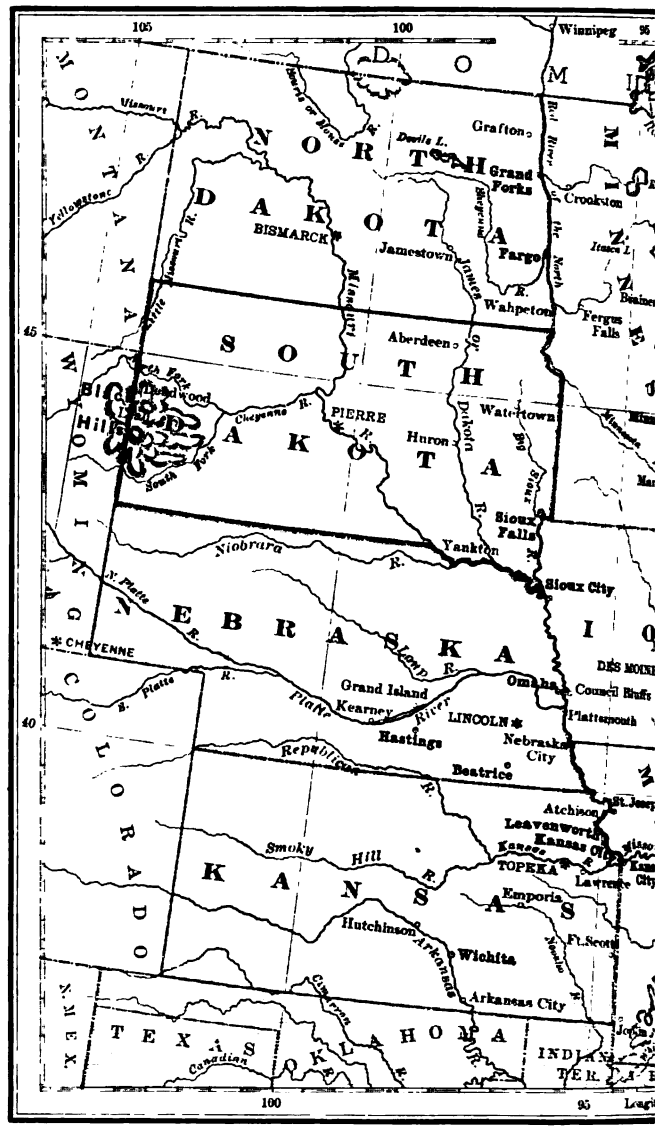
Throughout this section the summer is hot, but the winter is so cold that snow lies on the ground during much of that season.

Of all the food stuffs produced in this section, grain is the most important. Of what is bread made? Most of the flour is made from the seeds of the wheat plant. Wheat is a kind of grass. Some grasses have small seeds, and tender stalks which make excellent hay. Other grasses have coarser stalks, but their seeds are larger and contain the chief food matter stored up by the plant. These seeds are called *grain*.

The chief grains are wheat, corn, oats, barley, rye, and rice, but wheat is the best for bread.

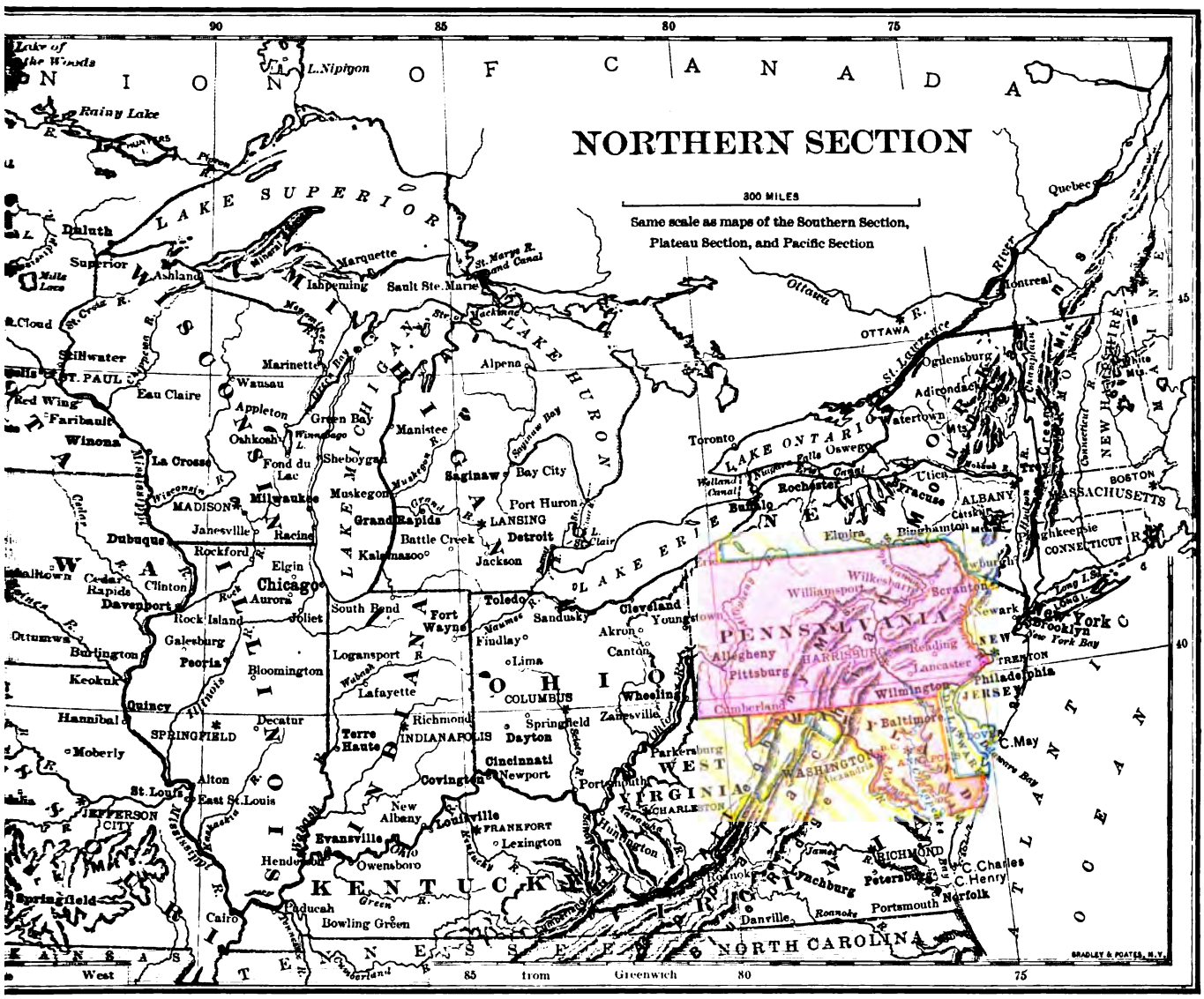


The shaded parts show the wheat-growing regions.



This little map shows in what parts of the country wheat is grown. Make a list of the states in this section in which it is grown; of the other states in which it is grown. Corn is grown all over the moist eastern lowland, in the Southern as well as in the Northern Section, but most of it in the wheat-growing states north of the Ohio and Missouri rivers. Our country produces more corn and wheat than any other country in the world.

Describe the surface of this section. At certain seasons one may travel through



much of this region, seeing on either side great fields of stately green corn with yellow plumes, or miles of yellow wheat, rising and falling before the breeze like the waves of the sea.

After the land is plowed, the wheat is sown by hand or planted by machines called drills. In the summer, reaping machines cut it, and threshing machines separate the seeds, which are then sent to the mills to be ground into flour. These machines are worked sometimes by horse power, and sometimes by steam.

On the grass and corn of the Northern Section are fattened cattle, hogs, and sheep, which furnish another important kind of food for man.

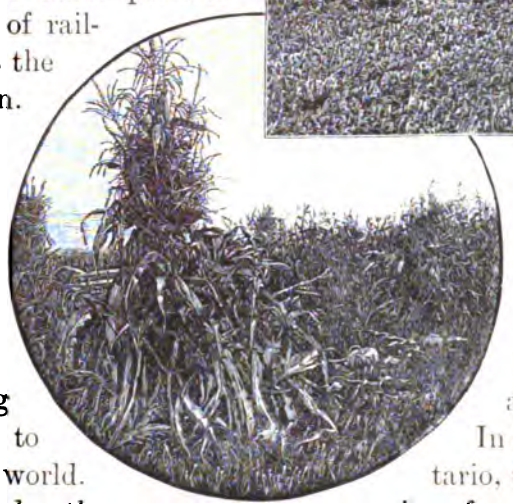
In the east, besides wheat and corn, vegetables and small fruits are grown, and much butter and cheese are made. In fact, along the shores of the two large eastern bays lie the market gardens in which food is grown to supply the great cities of the East. Name the bays. Name the states bordering on them.

Besides food, the section produces other useful things. Hides from the cattle are made into leather, and wool from the sheep is made into cloth. In the north, and in the mountains where farming is difficult, there are

forests which supply lumber for building purposes. The iron and coal mines of this section are among the richest in the world. Machinery is made of the iron, and many machines are run by means of the coal. Both together have made possible the great network of railways which covers the surface of the region.

The surface of the land is also crossed by many streams, giving water power to run machinery, or affording channels for conveying all these products to the rest of the world. To what basins do these streams belong? Through the Mississippi River, the interior of this

Harvesting wheat.



Corn.

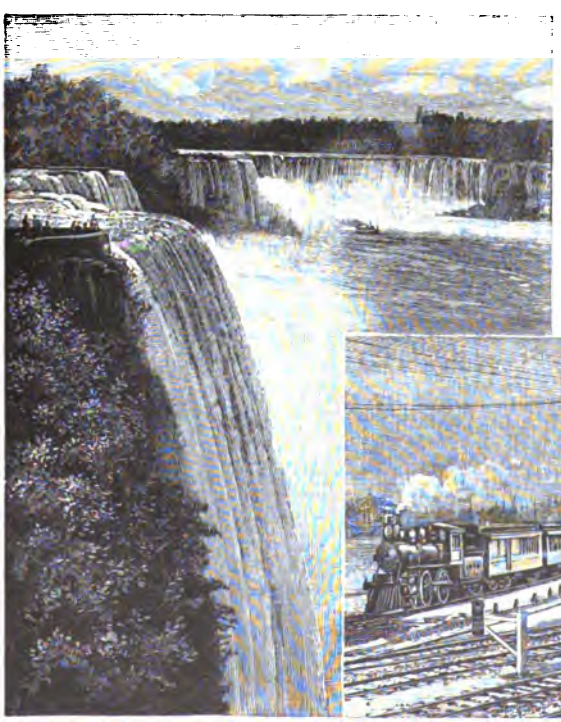
section may trade with the South; through the Missouri, with the Northwest; and through the Great Lakes and the Erie Canal, a direct water route is obtained to the eastern states and the Atlantic.

In its course from Lake Erie to Lake Ontario, the Niagara River flows over a precipice, forming Niagara Falls, the most famous cataract in the world. A small part of this mighty water power is used to turn machinery. As the falls prevent navigation through Niagara River, the Welland Canal has been dug in Canada from Lake Erie to Lake Ontario.

(*For Topics see end of next lesson.*)

30. Industries — Food and Lumber.

The part of this section west of the Appalachians was peopled by brave and hardy pioneers from the states along the Atlantic coast. They drove the



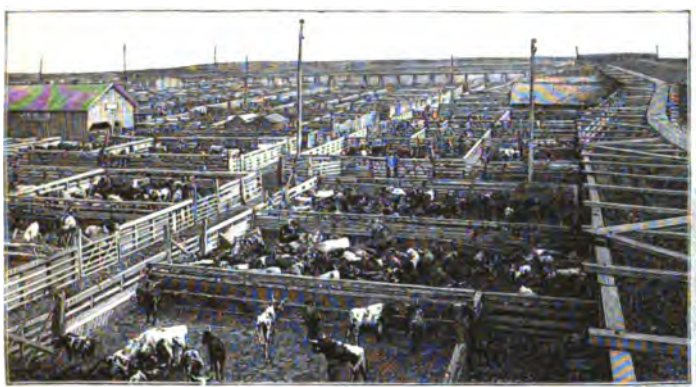
Niagara Falls.

Chicago is the greatest railway center in the world.

Indians westward, and built homes on the western prairies. Then followed, year by year, thousands of Europeans who came to work for their fortunes in the New World. Now more than half the people of the United States live in the busy and prosperous Northern Section.

Is this section more or less thickly peopled than the rest of the United States? (See map, p. 31.) The people live not only on farms in the country, but also in many large cities.

We have seen that the food stuffs grown in the eastern part of the section are raised to feed the people in the cities. The cities in the western part have grown up because of the grain and cattle and other products in their neighborhood. In the east the food is grown to feed the cities; in the west the cities were built to handle the food.



Stock yards in Chicago.

Find Minneapolis. It is at a waterfall on the Mississippi River. Here are the largest flour mills in the world, and many lumber mills. Give two reasons why flour is made in Minneapolis.

What is the great lake port of Wisconsin? Milwaukee manufactures much flour, leather, and beer.

Where is Duluth? Wheat, lumber, and iron ore are shipped from Duluth down the Great Lakes.

Much of the corn of this section is fed to hogs. What is the lake port of Illinois? Here hogs and cattle are killed and meat is packed; here also grain, collected in high storehouses or *elevators*, is poured through spouts into vessels, which carry it to the lower lake ports on its way to Europe. Chicago is the greatest city of America, except New York, and the greatest railway center in the world. Her growth has been so rapid, her trade and manufactures are so immense, and her citizens are so energetic, that the country is very proud of her.

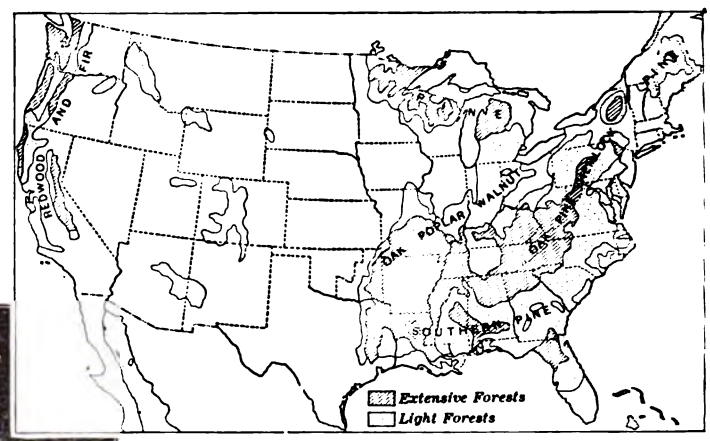
Much of the building lumber used in the eastern part of the United States comes from the forests of pine, an evergreen tree with needlelike leaves and very soft wood. From the oak, a hard-wood tree, wagon wheels and farm machinery are made. Oak, poplar, and walnut are much used for furniture. The bark of the oak and the hemlock is used for tanning leather.

Grain elevator in Chicago.

In most lumber regions the trees are felled and cut into logs in winter. Then when the snow melts and the streams are flooded, the logs are rolled into them and floated down to the mills. In some places it has been found easier to build railways into the lumber camps than to float the logs down the streams.

Which states of this section contain extensive forests? (See map, p. 46.) The cutting and sawing and shipping of lumber require the labor of many men. Where is Saginaw?

Like many smaller cities near the lake shores of Michigan and Wisconsin, it is a city of sawmills and planing mills. Find Grand Rapids, not far distant. It may be called a city of furniture factories. But in Chicago more furniture is made, and more lumber is prepared for building



The shaded part shows forest regions.

Railways are built to the lumber camps.

purposes, than in any other city in the world. Where is Detroit? It is well located between the lakes to receive both lumber for its car works and iron for its foundries and machine shops.

Lake Superior is joined to Lake Huron by St. Marys River, and in this river are rapids or low waterfalls which in the language of the early French explorers are called a *sault* (soo). Two canals have been dug around the falls so that vessels may pass from one lake to the other. The "Soo" canals are part of an exceedingly important water route for trade between Lake Superior and the lower lakes or even the Atlantic Ocean. Through what waters would goods shipped at Duluth pass in going to the Atlantic through Canada? What lake port in western New York? It has a great trade in grain and lumber, and is at the western end of the Erie Canal, through which the goods from Duluth may go to the Hudson River on their way to a great seaport at its mouth. Name the seaport.

A whaleback lake steamer.

Boots and shoes, clothing, and flour are made at Rochester, near Buffalo.

Cincinnati is the largest city in the Ohio basin. In what state is it? A great deal of clothing and leather is made there.

Leather is made also at Allegheny, farther up the river. In what state is it?

St. Louis, near the center of the Mississippi basin, is a great commercial and flour milling center. In what state is it?

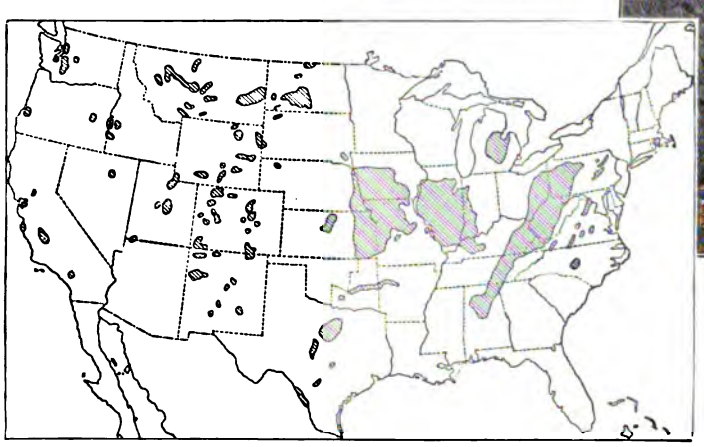
Tobacco grows well in Kentucky and Virginia, and is cut, manufactured, and shipped by thousands of busy workmen. Where is Louisville? Richmond? They are both noted for their trade in tobacco, much of which they send to New York and St. Louis to be manufactured.

TOPICS ON THE NORTHERN SECTION.

I. PHYSICAL FEATURES. Location. States. Surface. Soil. Climate. Advantages for trade.
II. PRODUCTS. Grain. Other foods. Other products.
III. PEOPLE. Former inhabitants. Settlement. Distribution.
IV. SEPARATE STATES. Each pupil may tell about one of the states: boundaries; surface and drainage; people; products; trade routes.

31. Coal and Iron.

Coal is a mineral dug out of the ground. It is composed of parts of plants which ages ago grew in swampy regions. As these plants fell year by year they gradually formed thick layers of vegetable matter, and were covered deep with mud and sand which were washed over them. In time the buried layers of vegetable matter changed to coal, and the mud and sand over them hardened to rock. Then they were pushed high above the sea, and now they are coal beds.



The shaded parts show where coal may be found.

From this map, locate by states our three largest coal fields. Over half of the coal mined in the United States comes from Pennsylvania.

A great deal of coal is used for heating dwelling houses, but most of it is used in the furnaces of steam engines and in making iron and steel. The coal used in making iron and steel is first heated in ovens until it becomes a porous mass called *coke*. Coke making is an extensive industry in Pennsylvania.

Can you find anything about the schoolroom that neither contains iron nor is made with the help of iron or steel tools? Steel is made from iron, but it is stronger, and it can be made so hard that it will scratch glass.

Rock containing iron is dug out of the ground and is called *iron ore*. On p. 49 is a picture of smelters, or blast furnaces, in which the iron is taken from the ore. Coke and iron ore are put into the towers, first a layer of one, then a layer of the other. The coke is set afire at the bottom, and a blast of air soon makes the fire so hot that the iron melts and sinks to the bottom of the furnace. The molten iron drawn from the smelter flows into troughs in the sand, where it cools and forms short bars, called *pigs*. The iron in this form is called *pig iron*. Much of the pig iron is changed to steel. Then, while at a white heat, it is rolled into rails, into sheets, or into heavy bars. Some of it is used in making ships; some in making buildings, railway tracks, and bridges; and some for tools and machinery.

Coal is dug out of the ground.

Years ago most of our iron ore was mined in Pennsylvania, but now most of it comes from the southern and western shores of Lake Superior. From what states, then, does it come? A great deal, too, is mined in Alabama.

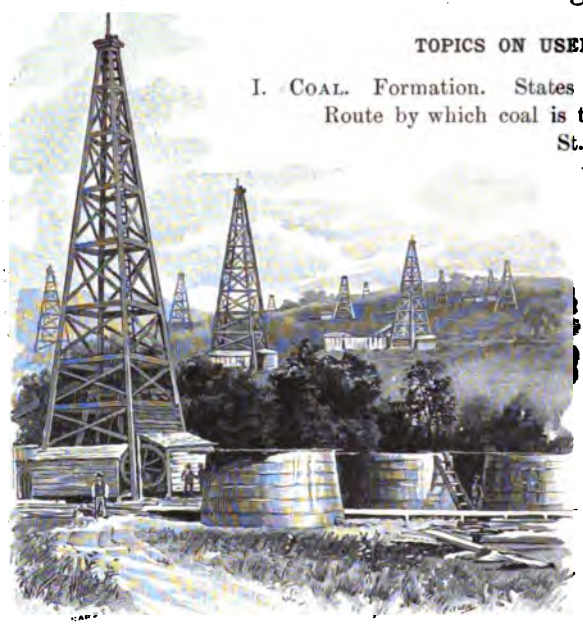
Find Pittsburg. It is in the Pennsylvania coal and iron region. Chicago is near the Illinois coal fields, and can receive Lake Superior ores cheaply by boat. These two cities are the chief centers of the iron and steel industry. This industry is also important in Cleveland, a lake port which is convenient to coal fields and to the ore from Lake Superior. In all these cities, as well as in Buffalo and Detroit, machinery and other ironware are made. Much glass is made at Pittsburg, and a great deal of coal is sent down the Ohio River from that city.

In what part of Pennsylvania is Scranton? It is in the anthracite coal region. Much of this coal is sent to Philadelphia, where many locomotives and steel ships and a great deal of machinery are made. Steel ships are built also at Cleveland and at Wilmington on the Delaware River. In what state is Wilmington?

Besides coal and iron, other useful minerals are found in the Northern Section. In northern Michigan are some of the richest copper mines in the world. In Michigan, near Saginaw, and in New York, at Syracuse and south of Rochester, salt is obtained. Name some of the uses of each of these minerals.

Wells have been sunk in some parts of this section, not for water, but for *petroleum*, out of which kerosene, benzine, and vaseline are made. This section furnishes more than half the petroleum used in the world. Most of it is obtained in Pennsylvania. Lines of iron pipe convey it to the neighborhood of Cleveland, Philadelphia, and New York, where it is *refined*, or made pure enough to use.

Natural gas is also obtained in this section. The supply is limited, but it is carried many miles in pipes from the wells to several cities, where it is burned for light and fuel. For what is Pittsburg noted? Where is the lake port, Toledo? Where are the inland cities Dayton and Indianapolis? Many houses in these and other cities are heated with natural gas.



Petroleum wells.

TOPICS ON USEFUL MINERALS.

I. Coal. Formation. States containing the largest coal fields. Route by which coal is taken from Pittsburg to Cincinnati, St. Louis, and New Orleans. Location of coal fields that supply Chicago, Cincinnati, Cleveland.

II. Iron. Location of the greatest iron-mining regions. Of the two chief iron- and steel-making cities. Routes by which ore is carried from the Superior mines to these cities.

32. Manufactures.

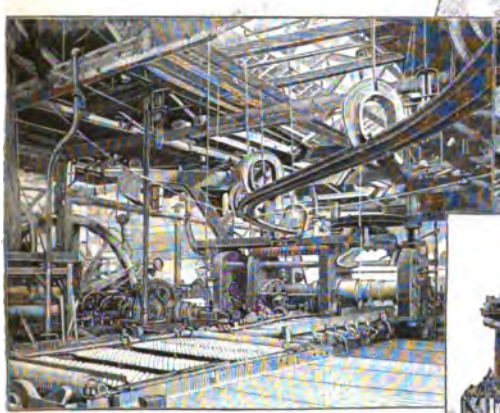
Can you think of anything which you use daily that has not been altered in some way to fit it for your use? A great many stories could be told of what happened to each article you eat or wear or use. The changing of any natural product to make it fit for the use of man is called *manufacture*.

Machinery used in manufacture is generally run either by water power or by steam. In the northeastern part of the United States the coast plain is narrow, and the mountain streams have many falls or rapids not far from the coast, nor from beds of coal and iron ore. So iron to make machinery, and water power, or fuel, to run it, are convenient to harbors where raw materials may be brought to the mills by sea, and where the manufactured articles may be shipped. Hence the northeastern part of the United States has long been

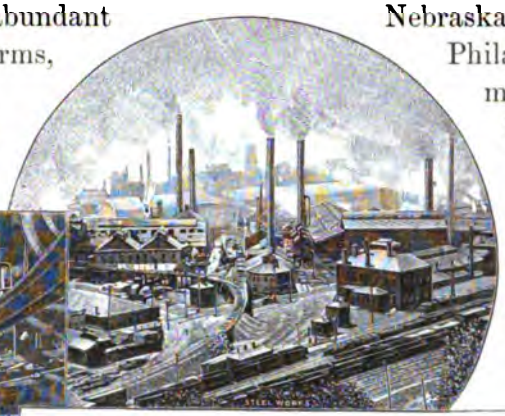
noted for manufacturing, and many articles are made from materials that have been brought a great distance.

West of the Appalachian Mountains the large deposits of coal and iron make it convenient to manufacture in that region the abundant products of the neighboring farms, forests, and mines.

Here, then, in a strip of land stretching across the northern part of the United States from the Atlantic to the Mississippi, and beyond, is the great manufacturing region of the country. And this country is the greatest manufacturing nation in the world.



Rolling mill near Pittsburg.



Blast furnaces near Pittsburg.

Manufactures may be divided into two great classes: 1st, those intended for use at home only; 2d, those intended to be sent away from home to be sold. In every town are many carpenters, bricklayers, and bakers, but as their trades are common to all cities and as the things made do not enter largely into commerce, they need not be considered here.

Our most important manufactures which enter into commerce are: —

Flour,	Lumber,
Cotton and woolen cloth,	Clothing,
Packed meats,	Liquors,
Iron and steel goods,	Boots and shoes,
Machinery,	Books and newspapers.

What city of the Northern Section is noted for flour making? What three cities, for the manufacture of iron and steel? About half the meat packing of the country is done in Chicago, in Kansas City, and near Omaha, Nebraska. New York, Chicago, and Philadelphia stand first in the manufacture of clothing and in the publishing of books and newspapers.

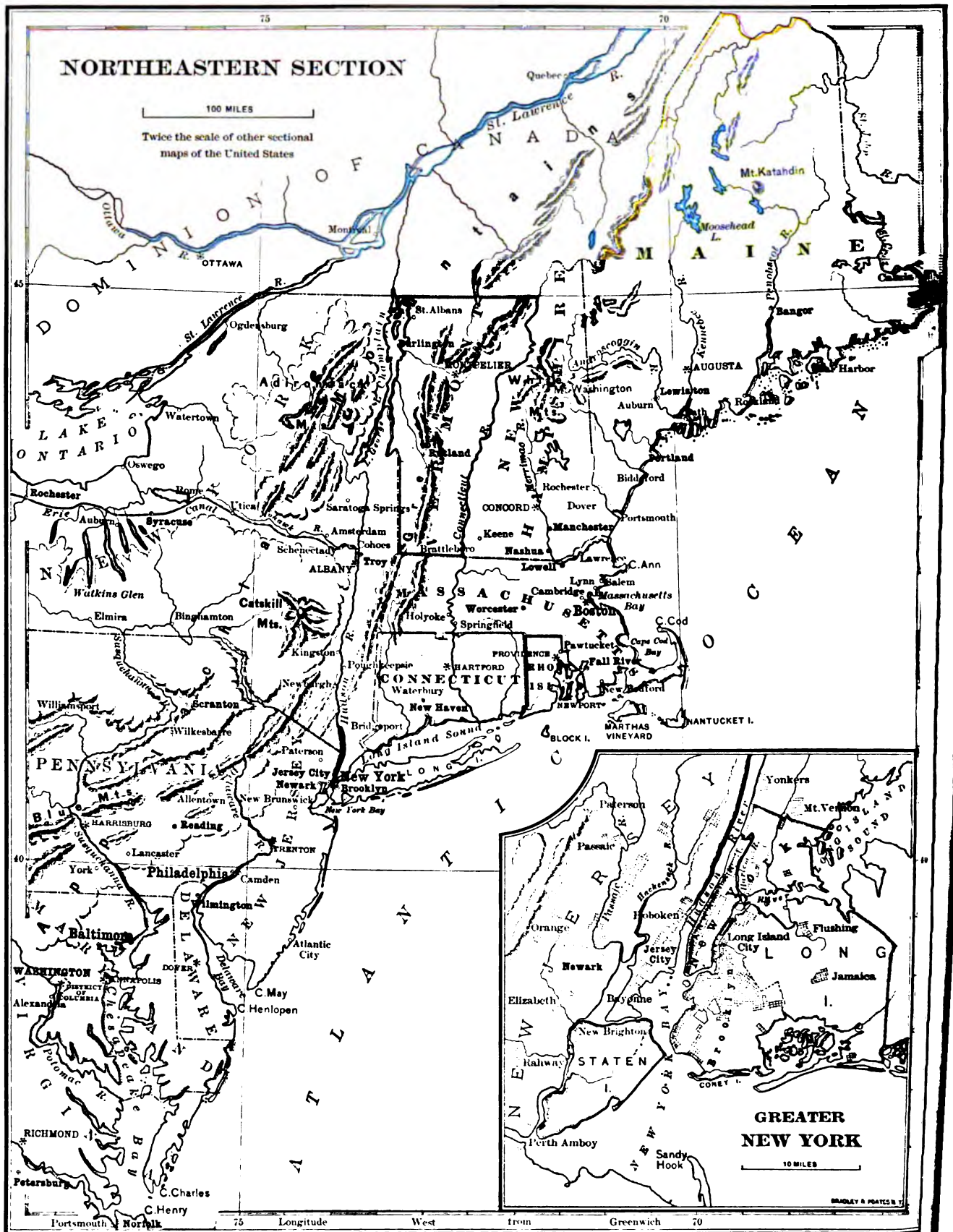
On the map on p. 37 find the city of Washington. Find Massachusetts Bay. Compare the distance between them with the length of the state of Kansas. This region east of the Appalachian Mountains, although no larger than one of the medium-sized states of the Union, contains about one sixth of the people and yields about one third of the manufactures of the whole United States. The region is thickly dotted over with manufacturing cities and towns.

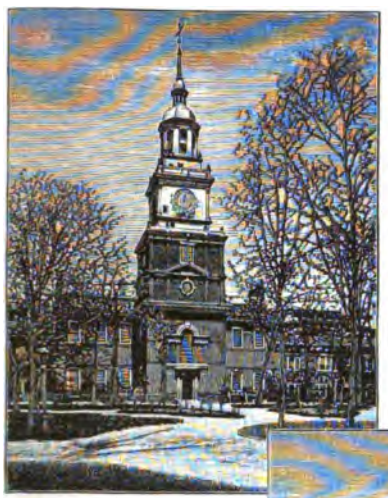
Find (on the map, p. 50) Washington, Baltimore, Philadelphia, New York, Brooklyn, Boston. These six cities contain nearly half the people in the region.

Washington is important as the capital of the nation. It is our most beautiful city.

Baltimore ships much grain, meat, petroleum, and coal. It is the depot for the important oyster fisheries of Chesapeake Bay. Its chief manufactures are clothing; canned fruit, vegetables, and oysters; and tobacco.

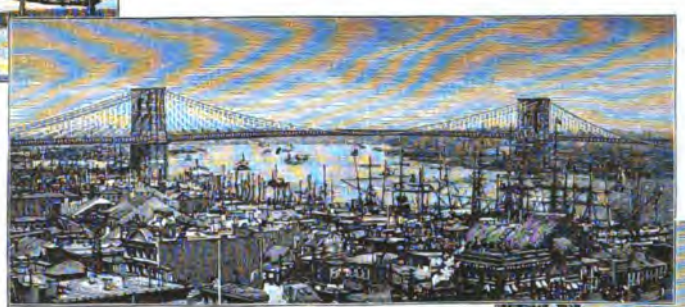
Philadelphia is really a seaport and is a great coal market. But two cities in the country contain more people or have greater


NORTHEASTERN SECTION
100 MILES
Twice the scale of other sectional maps of the United States
DOMINION OF CANADA
Quebec
St. Lawrence R.
Ottawa R.
OTTAWA
Montreal
Mt. Katahdin
Moosehead L.
MAINE
Penobscot R.
Kennebec R.
Androscoggin R.
Bangor
Harbor
AUGUSTA
Lewiston
Auburn
Portland
Biddeford
Portsmouth
Dover
CONCORD
Manchester
Nashua
Keene
Brattleboro
Rutland
Mt. Washington
WHITE MTS.
Connecticut R.
Merrimac R.
Ogdensburg
St. Albans
Burlington
MONTPELIER
Watertown
Oswego
LAKE ONTARIO
Rochester
Erie Canal
Utica
Syracuse
Auburn
Rome
Saratoga Springs
Amsterdam
Schenectady
ALBANY
Troy
Mohawk R.
Hudson R.
Adirondack Mts.
Green Mts.
Watkins Glen
Elmira
Binghamton
Catskill Mts.
Susquehanna R.
Kingston
Poughkeepsie
Newburgh
Williamsport
Scranton
Wilkesbarre
PENNSYLVANIA
Allentown
Bethlehem
Easton
Delaware R.
Paterson
Jersey City
Newark
New York
Brooklyn
New York Bay
New Brunswick
Raritan R.
Long Island Sound
Bridgeport
New Haven
Waterbury
CONNECTICUT
HARTFORD
Holyoke
Springfield
Worcester
MASSACHUSETTS
Lowell
Lawrence
Cambridge
Boston
Massachusetts Bay
Lynn
Salem
C. Ann
C. Cod
Cape Cod Bay
Pawtucket
Providence
RHODE ISLAND
Fall River
New Bedford
NEWPORT
BLOCK I.
MARTHAS VINEYARD
NANTUCKET I.
Atlantic Ocean
Susquehanna R.
HARRISBURG
Reading
Lancaster
York
Philadelphia
Camden
TRENTON
Wilmington
DELAWARE
Baltimore
Chesapeake Bay
Delaware Bay
Atlantic City
C. May
C. Henlopen
WASHINGTON
DISTRICT OF COLUMBIA
Alexandria
Potomac R.
VIRGINIA
RICHMOND
Petersburg
C. Charles
C. Henry
Portsmouth
Norfolk
Dismal Swamp Canal
Albemarle Sound
Roanoke R.
75
70
45
40
Longitude West from Greenwich
GREATER NEW YORK
10 MILES
Yonkers
Mt. Vernon
Long Island Sound
Passaic
Hoboken
Orange
Jersey City
Newark
Elizabeth
Bayonne
New Brighton
Rahway
STATEN I.
Perth Amboy
Sandy Hook
Flushing
Long Island City
LONG I.
Jamaica
Coney I.
Hudson R.
Harlem R.
Passaic R.
Raritan Bay
Newark Bay
Kill Van Kull
Arthur Kill
BRADLEY & POATES N.Y.



Independence Hall, Philadelphia.

manufactories. The chief manufactures are carpets and woolen goods, refined sugar, clothing, machinery, cotton goods, and leather. The Declaration of Independence was adopted in this city July 4, 1776.



East River, New York and Brooklyn Bridge.

New York city is built partly on Manhattan Island, and has a fine harbor. Most of the foreign trade of the country passes through this port, and ships from all parts of the world are constantly loading or unloading at the wharves. New York has more people, more manufactures, and greater wealth than any other city on the continent. Publishing and the making of clothing are leading manufacturing interests. The city is so crowded, that, besides ordinary street cars, there are elevated steam railways for passengers in some of the streets. On another island, and on the mainland opposite, are two large and several smaller cities. All together they form one great city, and one of the largest in the world.

Brooklyn is a great center of manufacture, particularly of refined sugar. On what island is it? It is really a part of New York, and is connected with Manhattan Island by an immense suspension bridge.

TOPICS ON MANUFACTURES.

I. MANUFACTURES. Definition. Two classes. Chief manufactures.

II. REGION. Location. Advantages east of the Appalachian Mountains. West of the mountains.

III. MANUFACTURING CITIES. East of the mountains. West of the mountains.

33. The Northeastern Section.

Name the six states in the extreme northeastern part of our country. Name their capitals. Which state has two capitals? Which has no seacoast? Which are in the Appalachian region?

The six northeastern states of the Union are called the New England states. Being so near the coast, they are cooler in summer, and have more snow in winter, than many of the northern states further inland.

Look at the map on p. 43, and compare the size of these states with that of the more western states. They are so small that they are drawn here on a larger scale than is used in the maps of the other sections.

Elevated railway, New York.

The surface of the New England states is rough and rocky, and there is little land suitable for farming except in the river valleys. The northern part is covered with forests, but southern New England forms part of the great manufacturing region of the country.

The streams afford abundant water power near the coast, where there are many good harbors. To these, ships bring coal from the mines of Pennsylvania, as well as cotton from the southern states, rubber and hides from South America, wool from Australia, and many other raw materials.

Boston is the largest city of New England, and one of the great seaports and manufacturing cities of the country. Where is it? It is the center of the wool trade in the United States, and is a great market for fresh fish. Americans think of Boston as the home of the Puritans and the place where the War for Independence began. For what are Bunker Hill and Faneuil Hall noted? Boston and the neighboring city of Cambridge have long been literary centers, and near them many of the great American authors, such as Longfellow, Lowell, Holmes, and Hawthorne lived and wrote.

Bunker Hill Monument.

Commonwealth Avenue, Boston.

Faneuil Hall, Boston.

In no part of the world is there a greater variety of manufactures than in New England, but by far the most important are those of cotton and woolen cloth and of boots and shoes. Where are Fall River, Lowell, Manchester, New Bedford? They are the centers of the cotton-weaving industry of the country. Find Providence; Lawrence. They are great centers of woolen manufacture. From what is raw wool obtained? Name some use of manufactured wool. Outside of New England the chief center for the manufacture of cotton and wool in this country is Philadelphia, where most of our carpets are woven.

Cotton is brought to the mills in bales. It is first washed and cleaned, and then combed and carded into slender ropes of loose fiber. These are twisted or spun into yarn, which is then placed upon the looms, and the quick shuttle, darting back and forth, weaves it into cloth. Thousands of men, women, and girls are employed in the cotton factories.

The making of thread and the manufacture of silk are important industries in southern New England, but are even more important in New Jersey. Much of the thread is made in Newark, and much of the silk in Paterson. In what state are these cities?

Cotton mill, Manchester.

There are great factories for all kinds of clothing in many of the cities of this region. What three cities in the Union make the most clothing? Boston ranks next to them in this industry. Where is Lynn? About half the factory-made shoes worn in this country are made in that and neighboring places of Massachusetts. Hats are made in Connecticut and New Jersey, and gloves in New York state. Where is Troy? It has the largest shirt and collar factories in the country.

Other important manufactures of southern New England are rubber goods and all kinds of fine machinery, brass work, and other metal ware, as sewing machines, bicycles, clocks, watches, jewelry, hardware, pins, needles, hooks and eyes, firearms, and many other things. Where are Worcester, New Haven, Hartford? They are engaged in such manufacturing.

Another great manufacture of the Northeastern Section is paper. The best book and writing paper is made from cotton and linen rags. The rags are thoroughly cleansed by soaking and boiling in water. They are then torn into shreds and reduced to a fibrous mass or *pulp*. The moist pulp is passed between heated rollers and pressed into thin sheets, which when dried are called *paper*. Newspaper and other cheaper kinds are made of wood which has been reduced to pulp by grinding in water.

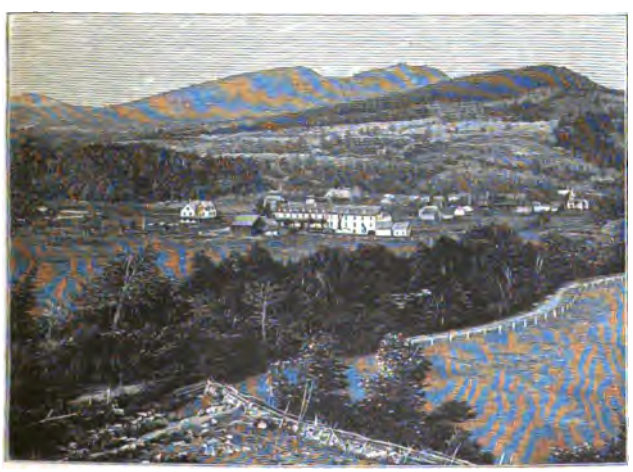
Where is Springfield? Most of the rag paper of this country is made near this city, but in Maine and New Hampshire much wood-pulp paper is made from spruce timber.

Find Portland. It is the largest city in Maine and has one of the finest harbors in the country.

There are other important products from this section. Granite is quarried in all the states; ice, lumber, potatoes, and slate are obtained from Maine; soapstone from New Hampshire; marble, slate, maple sugar, and dairy products from Vermont; and tobacco from the valley of the Connecticut River. Great numbers of codfish are brought by the fishermen of Cape Ann from the waters south of Newfoundland. Some of these products are exported and others are sent to the various parts of the Union.

Cathedral Rock, Bar Harbor.

The White Mountains, in New Hampshire; the Green Mountains, in Vermont; the Berkshire Hills in western Massachusetts; and Bar Harbor, Newport, and the other seashore resorts of the section are much visited in summer by people from the crowded cities.



The White Mountains, in New Hampshire.

TOPICS ON NORTHEASTERN AND NORTHERN SECTIONS.

I. New England States. Location. States. In what respects alike. Leading industry. Largest city.

II. Northeastern and Northern States: — Food Products. From which cities is meat shipped? In which cities is flour made? To what great cities are the vegetables of the eastern garden states sent? In what cities is meat packed? What city is a great fish market? In what city are oysters canned?

III. Other Products. From what cities is lumber exported? In what cities is furniture made? What cities manufacture clothing? What cities make cotton cloth? What city makes thread? What city makes silk goods? In what city are boots and shoes made? In what cities are iron and steel made? In what cities are steel ships made? What cities are tobacco markets? Near what city is paper made?

IV. Separate Cities. Each pupil may find out all he can about one or more of the cities in the following list, and tell about them according to these topics: the state in which each is; its location; its occupations; its trade routes; anything for which it is specially noted.

1. New York
2. Chicago
3. Philadelphia
4. Brooklyn
5. St. Louis
6. Boston
7. Baltimore
8. Cincinnati
9. Cleveland
10. Buffalo
11. Pittsburg
12. Washington

34. The Southern Section.

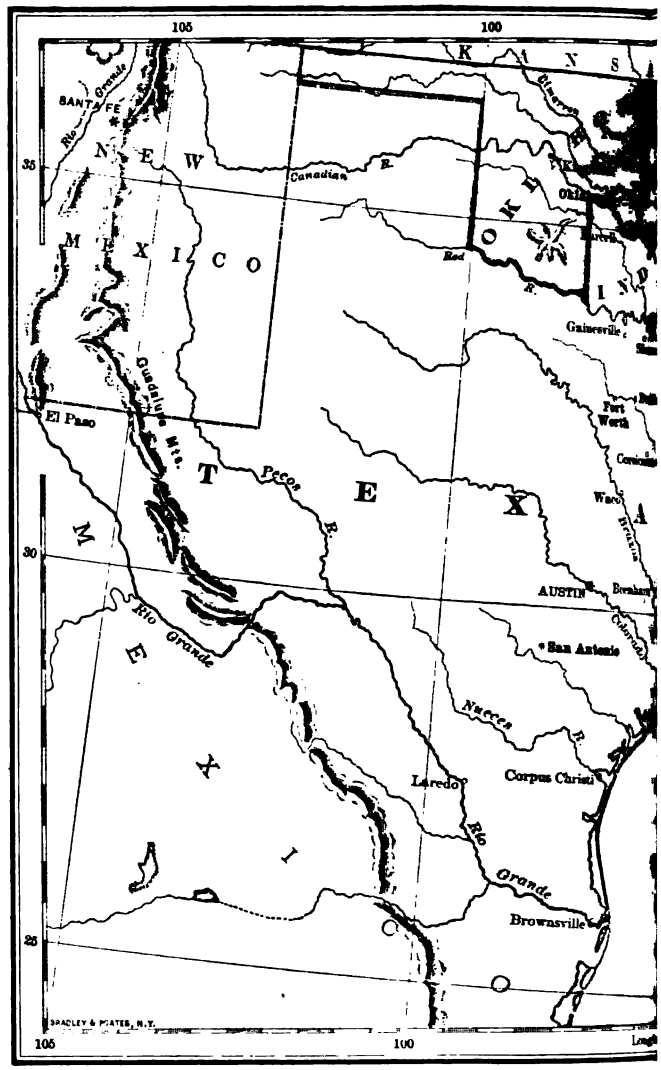
Which states of this section border on the Atlantic? Which is a peninsula? Which border on the Gulf? Which have no seacoast? Describe the surface and the drainage. Which lie east of the Mississippi? Which lie west? Name the capital of each and tell where it is.

In the Southern Section the summers are long, and snow seldom lies on the ground in the winter. There are fewer cities than in the North, for most of the people live on farms or plantations. Cotton is raised in all these states and is the most important crop.

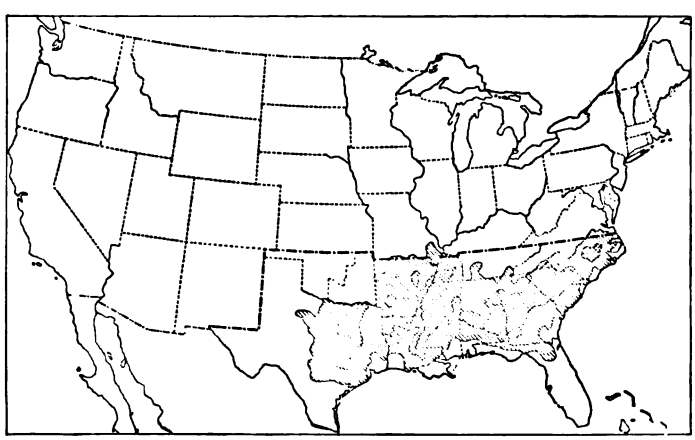
Cotton is the fluffy thread or fiber that grows around the seed of a bush three or four feet high. About six weeks after the whitish blossoms of the plant have turned pink and withered, the seed pods, or bolls, ripen and burst, and the fluffy cotton hangs from them in white balls. (See the picture on p. 56.)

In August the gathering begins. Day after day the cotton is picked by hand from the freshly opened pods, until by December the crop has been harvested. The fiber is separated from the seeds by a machine called a *gin*, and the cotton is then pressed and corded into bales.

From the seeds which are left a fine quality of oil is pressed, which is taking the place of olive oil; and the *cake*, or substance that remains after the oil is pressed out, is used to fatten cattle and for fertilizer.



Cotton is grown in many warm, moist countries, but the United States produces about four times as much as all the others. This small map shows the cotton-raising states. Make a list of them.



The shaded part shows the cotton-growing region.

Much of the cotton is taken to the mills in the Southern Section; more is sent to those in New England; and a great part is carried across the Atlantic to Europe. Raw cotton forms our chief export.

When the country was first settled white laborers were scarce in the colonies, and shiploads of negroes were brought from Africa and sold as slaves. The negroes worked well, so the trade in men

increased until many negroes were owned, particularly by the great planters of the South. In 1863 the slaves were declared free. Most of the work on the plantations is still done by the negroes, although the land is owned chiefly by white men.

Besides cotton, these states produce corn, sugar, rice, and tobacco. Fruit and spring vegetables are sent to cities in the North long before they are ripe in that region. In the coast plain are extensive forests of southern pine, which yield much valuable lumber.

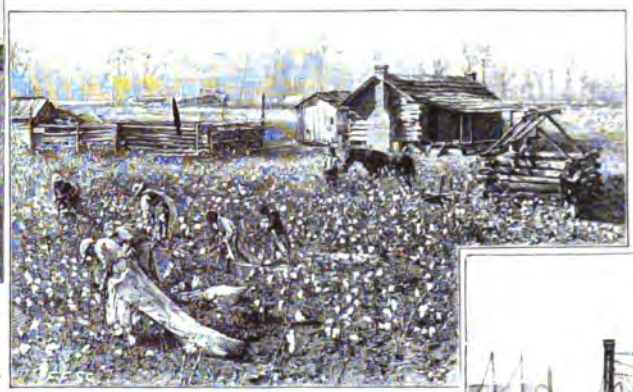
Manufacturing is not so extensive as in the Northern Section, but turpentine and rosin have long been extracted from the pine trees in several of the states, and cotton cloth and tobacco are now manufactured in many of the cities and towns. Where is Atlanta? Augusta? In these cities there are large cotton mills.

Among the mountains of Alabama and Tennessee excellent iron ore is mined; coal is also found there, and these are now great iron-producing states. Where is Birmingham? Chattanooga? They are the centers of the southern iron industry.

New Orleans, the largest city and great cotton market of the South, is really a seaport. Besides cotton it exports many articles sent down the river from the upper Mississippi valley, and has a large trade in the rice and sugar

Cotton plant.

raised in the lowlands of the Mississippi delta. It consists of a modern American part and an old French part. The city was settled by people from France, a country of Europe between Spain and England. Many people of French descent still live there and speak the French language.



Picking cotton.

Name two other Gulf ports. Where are they? Mobile and Galveston are great cotton markets, and Mobile ships much lumber.

Name two river ports on the Mississippi above New Orleans. Memphis is the largest river port between St. Louis and New Orleans.

Name three seaports on the Atlantic coast. Where are they? Wilmington has a large trade in lumber, turpentine, and cotton, and Savannah and Charleston in cotton and rice.

Blast furnaces, Birmingham.

The peninsula of Florida has a sandy soil and contains many lakes and swamps. Her farmers send oranges, lemons, and vegetables to the North. Many of the inhabitants are northern people who settled there for the sake of the warm winter climate. St. Augustine is the oldest town in the United States. Name a river port north of it. What seaport is on an island in the extreme south of the state? Cigars are manufactured there from tobacco brought from the neighboring island of Cuba.

Wharf or levee, New Orleans.

From the map on p. 37 find the largest state in the Union. Though Texas raises more cotton than any other state, only the eastern half of the state belongs to the cotton region, the western part being a grazing country. In the northern part wheat is raised. Dallas is the largest city in this region. Many of the Texans are of Spanish descent, like the Mexicans just across the Rio Grande.

This section includes two territories. What is a territory? In Oklahoma many white people have settled within the last few years. Indian Territory is set apart as a home for the Indian tribes, some of which are partly civilized.

An orange grove in Florida.

The sandy beaches and grass-covered swamps of the coast, the pine forests of the Atlantic and Gulf coast plains, the orange groves of Florida, the hard-wood forests of the Appalachian region, the swamps and tiny lakes of the lower Mississippi valley, and the broad grazing lands of western Texas give a wonderful variety to the scenery of this section. The people of the South were made poor by the great war over thirty years ago, but they are now busy in improving their farms, building up their cities, and reëstablishing their prosperity.

TOPICS ON THE SOUTHERN SECTION.

I. The States. Location. Names. Reasons for grouping them together. Names of important cities.

II. Raw Cotton. Description of plant. People who pick cotton. Use of cotton. States where cotton is grown.

III. Cotton Manufacture. Where the cotton is manufactured. Cotton-manufacturing cities of the United States. The manufacture. How cotton ranks among the exports of the country. Where the exported cotton goes.

IV. Cities of the Southern Section. Each pupil may find out and tell about one or more of the following cities: where it is; in what state; means of commerce; for what it is noted.

1. New Orleans
2. Nashville
3. Atlanta
4. Memphis
5. Charleston
6. Savannah
7. Dallas
8. Augusta
9. Mobile
10. Chattanooga
11. Galveston
12. Birmingham

35. Grazing and Cattle.

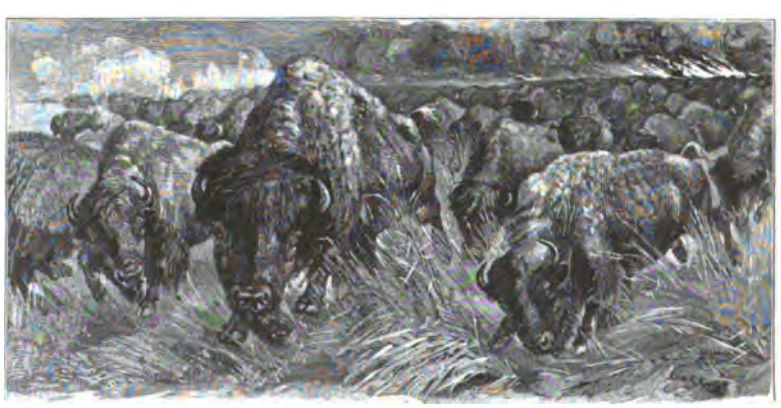
When the settlers had worked their way across the forest-covered Appalachians and down the Ohio valley, they came at length to the great treeless prairies. The prairie land was easier to cultivate than the forest lands. Why?

These grassy plains were once the feeding place of great herds of *bisons*, often called *buffaloes*. The Indians used to set fire to the long dry grass so that young grass might grow, and the fires prevented trees from growing, except on the borders of the streams.

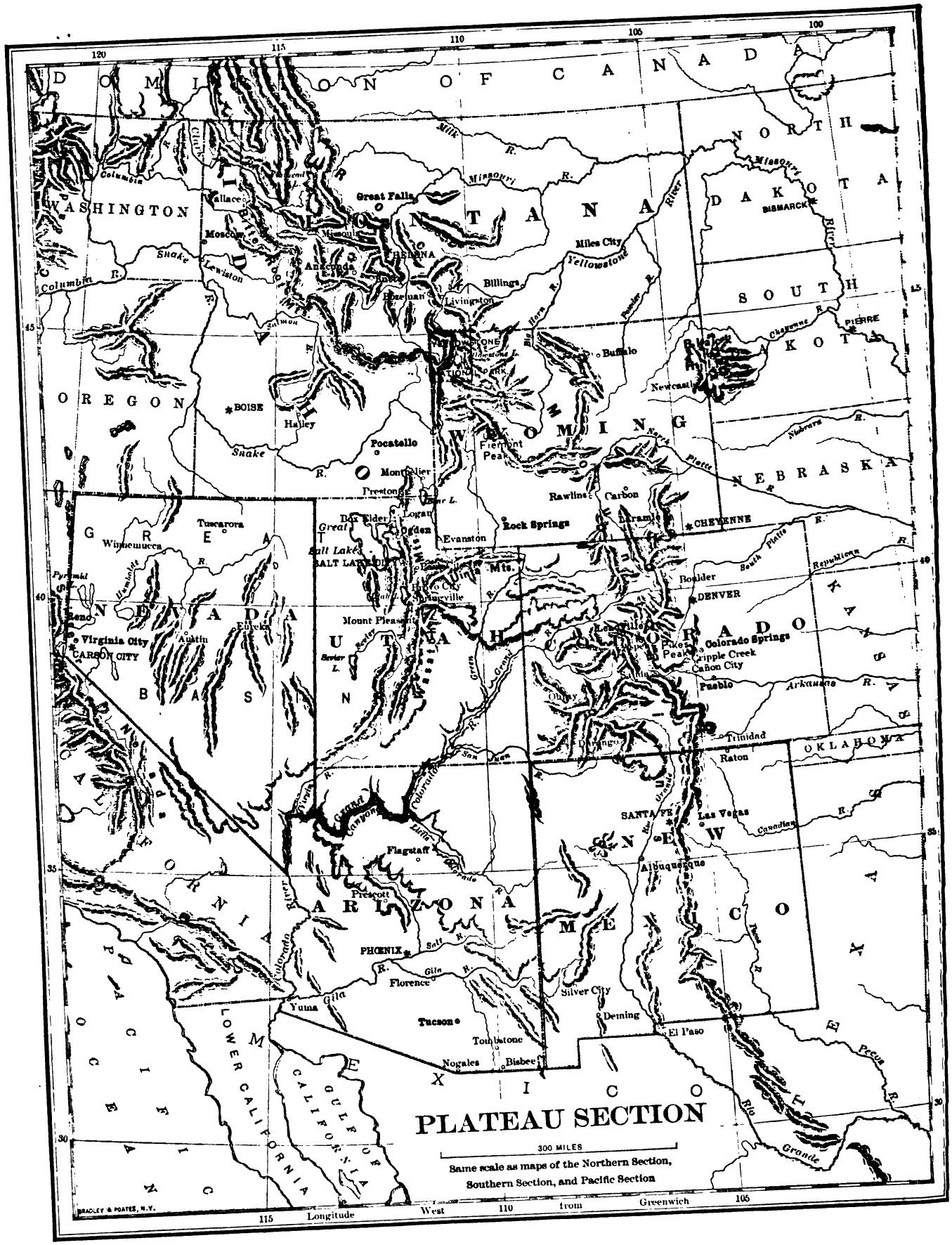
Where do the winds from the Pacific drop their moisture? Why? From what direction do the rain-bearing winds blow in the eastern half of the United States? Look at the map on p. 40, and tell where the rainfall is not sufficient for farming. Between the Rocky Mountains on the west and the grain-growing states on the east is a belt of country too dry for either farming or forests. We have already learned that this region is a high plain or plateau; its surface is so smooth that it is called the Great Plains.

On these dry plains the chief vegetation is *bunch grass*, which grows in clumps or clusters. It is coarse, but it is excellent food for cattle.

The bisons which once roamed on the plains have been destroyed, and their place has been taken by herds of cattle; the Indians who



These plains were once the feeding place of great herds of bisons.

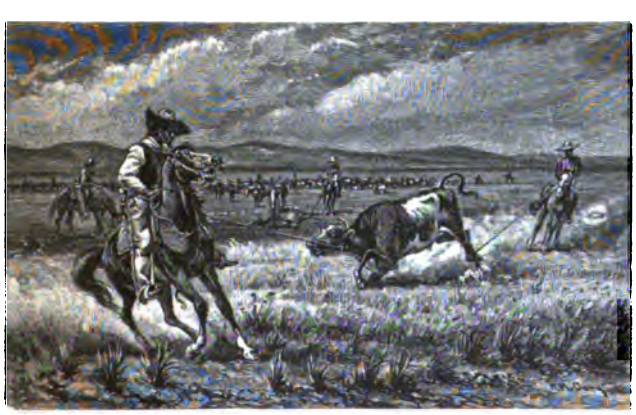

PLATEAU SECTION
300 MILES
Same scale as maps of the Northern Section,
Southern Section, and Pacific Section
Longitude West from Greenwich
BRADLEY & POATES, N.Y.
DOMINION OF CANADA
NORTH DAKOTA
SOUTH DAKOTA
MONTANA
WASHINGTON
OREGON
IDAHO
WYOMING
NEBRASKA
NEVADA
UTAH
COLORADO
ARIZONA
NEW MEXICO
OKLAHOMA
GREAT BASIN
PACIFIC OCEAN
LOWER CALIFORNIA
GULF OF CALIFORNIA
Great Falls
Missoula
HELENA
Butte
Anaconda
Miles City
Billings
Livingston
Bozeman
Yellowstone Park
Buffalo
Newcastle
BISMARCK
PIERRE
Moscow
Lewiston
Wallace
Columbia R.
Snake R.
Missouri R.
Milk R.
Yellowstone R.
Powder R.
Big Horn R.
Cheyenne R.
Niobrara R.
Platte R.
Republican R.
South Platte R.
Arkansas R.
Canadian R.
Pecos R.
Rio Grande
Colorado R.
Green R.
Grand R.
Gila R.
Salt R.
Virgin R.
Humboldt R.
Truckee R.
Carson R.
Walker L.
Pyramid L.
Great Salt Lake
SALT LAKE CITY
Ogden
Logan
Box Elder
Evanston
Rock Springs
Rawlins
Carbon
Laramie
CHEYENNE
Fremont Peak
Pocatello
Montpelier
Preston
Boise
Halley
Tuscarora
Winnemucca
Reno
Virginia City
CARSON CITY
Austin
Eureka
Mount Pleasant
Uinta Mts.
Sevier L.
Boulder
DENVER
Colorado Springs
Pikes Peak
Cripple Creek
Canon City
Pueblo
Trinidad
Raton
SANTA FE
Las Vegas
Albuquerque
Flagstaff
Prescott
PHOENIX
Florence
Yuma
Tucson
Tombstone
Nogales
Bisbee
Silver City
Deming
El Paso
Grand Canyon
Little Colorado
Moqui Grande
Salt River Valley
Gila
Colorado River
Rio Grande
Pecos R.
Arkansas R.
Canadian R.
Republican R.
Niobrara R.
Platte R.
Cheyenne R.
Powder R.
Big Horn R.
Yellowstone R.
Missouri R.
Milk R.
Columbia R.
Snake R.
Green R.
Grand R.
Gila R.
Salt R.
Virgin R.
Humboldt R.
Truckee R.
Carson R.
Walker L.
Pyramid L.
Great Salt Lake
Uinta Mts.
Sevier L.
Fremont Peak
Pikes Peak
Cripple Creek
Canon City
Grand Canyon
Little Colorado
Moqui Grande
Salt River Valley

hunted the bison have been confined to certain portions of the country called *reservations*, and their place has been taken by white herdsmen called *cowboys*. Where is one of the Indian reservations?

The great stock farms of the plains are called *ranches*. Some of them are as large as one of the smaller eastern states. Very little land is cultivated. There are few fences, and the immense herds roam from one part of the country, or *range*, to another. The grass turns brown early in summer, but it forms good food through the winter, even when covered with snow.

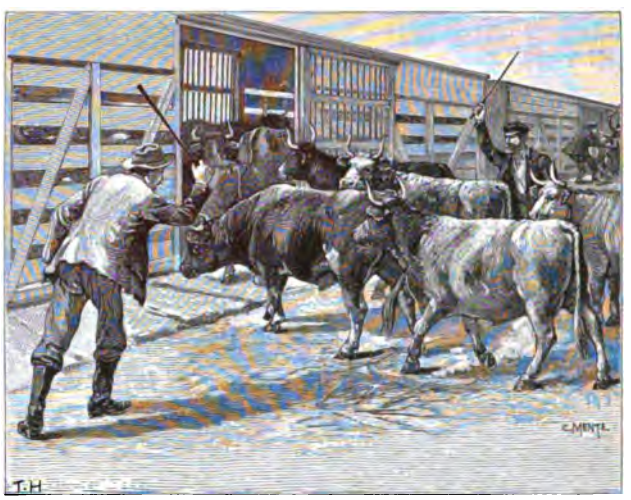
Twice a year the cattle of each range are collected in a gathering called a *round-up*. Each owner takes the cattle bearing his mark, and the young cattle are marked or branded with a hot iron. Sometimes an unmarked animal tries to escape, but quick as a flash the cowboys are after it on their swift ponies. One throws his lariat around its neck, another lassos its hind legs, and in an instant the animal is sprawling on the ground. It is then quickly marked and liberated.

Which are the great meat-packing cities of the Northern Section? The hogs are fed on



White herdsmen called cowboys.

the corn, and the sheep on the grass and hay raised in those states, but many of the beef cattle are raised on these ranches. Day after day, long trains filled with live cattle move eastward from the plains. Where is Dallas? Find Cheyenne, in Wyoming. These cities are markets for live cattle. From Chicago and Kansas City dressed beef is sent in refrigerator cars to the markets of almost every city and town in the United States, and at the eastern seaports ships



Loading cattle cars.

are loaded with cattle, or with meat packed in ice, and sent to Europe, where the people buy the products of our western plains.

TOPICS ON GRAZING AND CATTLE.

I. THE GRAZING REGION. Location. Climate. Former occupants. Present occupants.

II. CATTLE. A ranch. A cowboy. A round-up. How cattle are shipped. Cities noted for cattle shipping or for meat packing.

36. The Plateau Section.

Name the states of this section. Which of them are crossed by the Rocky Mountains? Which lie partly in the Great Basin? Which lie partly in the Colorado basin? Describe the surface of this region. Describe its drainage. In what direction do the streams of the eastern part of this section flow? Of the western part? New Mexico and Arizona are not yet states. What, then, are they? Name the capitals of these states and territories and tell where each is.

These states are all in the highland region, gold and silver are found in all of them, and in several of them the mining of the precious metals is the most important in-

dustry. This dry plateau region is so high that the climate is healthful, but its summers are very hot, and its winters, except in the extreme south, are quite cold.

Although little rain falls, crops of grain, hay, and fruit are nevertheless grown in parts of this region. Most of the rivers of the Plateau Section rise in the snow-covered mountains, and contain more water in the spring than in the fall. Water from them is led in canals or ditches over the land where the crops are grown. This process of watering is called *irrigation*.

A silver mine (outside).

Pikes Peak, Colorado.

Within a silver mine.

The ditches are dug from some point in the river higher than the land to be irrigated. In places dams are built across the smaller streams, making reservoirs or ponds to hold the water. The water is distributed over the fields in several ways. Sometimes a ridge of newly plowed earth is thrown up so as to make a basin, and enough water is drawn from the main ditch to fill it. While this is sinking into the ground, the water from the ditch is let into another basin, and so on until the whole field or orchard is irrigated. Sometimes the water is merely made to flow in furrows, as in the picture on p. 63.

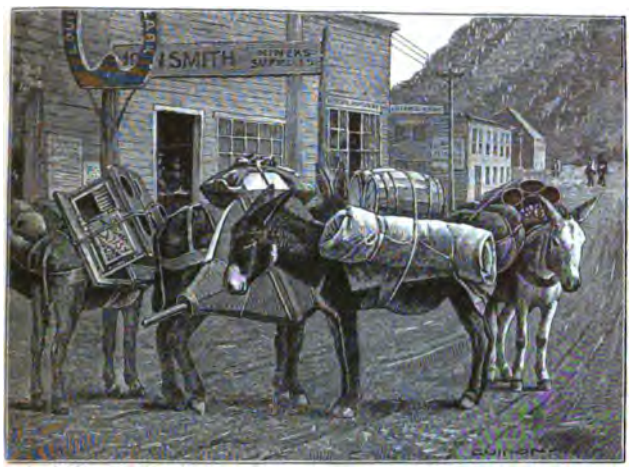
Most of the irrigated land lies in the western highland and the Great Plains, but in the southern part of California, also, a great deal of the cultivated land is irrigated.

In the western highland there are a few river valleys level enough for farming. There are also *parks*, or wide, grass-covered valleys among the mountains, that are good grazing lands; even some of the steep slopes are grass-covered and are used as herding grounds. But most of the country is too rough and too dry for either farming or herding. These mountainous regions are chiefly valuable for the gold, silver, and copper which they contain.

The gold is often found in fine grains mixed with sand and gravel at the bottom of streams. In the Plateau Section, however, most of the gold and all the silver are mined from veins or ledges of rock far below the surface of the ground, much as coal is mined. The rock is raised to the surface, crushed and smelted to get the precious metal from it.

This region produces one fourth of the silver in the world, and, with California, almost one fourth of the gold.

Nevada was once the greatest silver-producing state, but Colorado and Montana now produce the most silver. Montana contains also the largest copper mines in the world. Butte is the great copper-mining center. Leadville is in a rich silver-mining region. Where are these places? Among the mountains, however, there are many mining camps which are far away from any town or railroad. To these camps all sup-



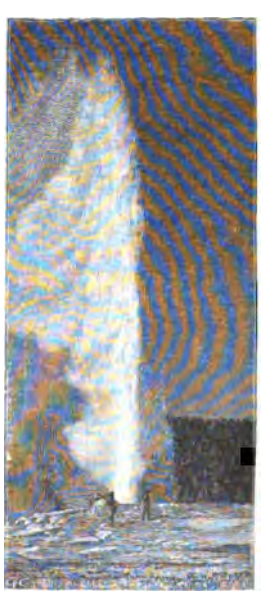
A pack train loaded for a mining camp.

plies — food, blankets, stoves, and tools — must be carried over the rough mountain trails on the backs of little donkeys or *burros*.

Denver is the largest city in the section, and Pueblo is a manufacturing and railroad center. The smelting and reduction of ores is a leading industry in both of these cities, and also in Butte and Leadville.

In the plains east of the mountains, and in the Rio Grande valley, cattle are raised for the eastern markets. For what is Cheyenne noted?

Where is Yellowstone National Park? It is famous for its beautiful scenery, and for *geysers* or springs which every little while spout hot water high into the air. Rock is dissolved in this hot water. When the water cools after reaching the surface, this mineral matter is deposited in beautifully colored terraces and basins about the springs.

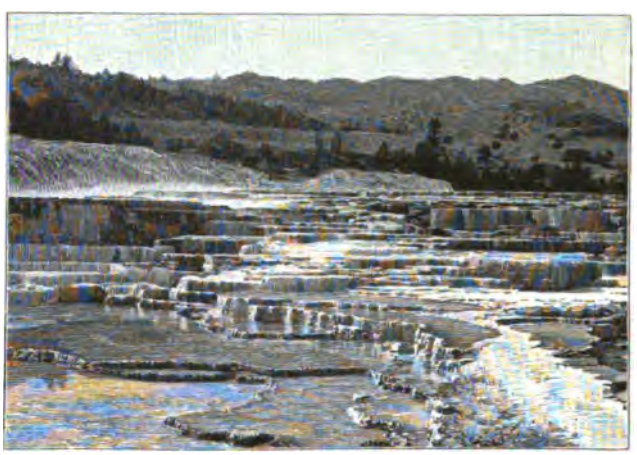


Old Faithful Geyser.

What have you learned about the river in southern Idaho? In northern Idaho there is more rainfall than in any other of these states, and some of its mountain valleys produce good crops of wheat.

Where is Great Salt Lake? Long before the mines of this section were discovered, a band of people called Mormons, who were driven from the settlements east of the Mississippi, journeyed over the mountains and settled on the shores of that lake. They irrigated the land and raised fine crops. Other people came to the settlements, until at last the region was admitted to the Union as the state of Utah.

In Arizona and New Mexico, as in Texas,



Hot Spring Terraces, Yellowstone Park.

many of the people are of Spanish descent, and speak the Spanish language. These people are chiefly cattle herders.

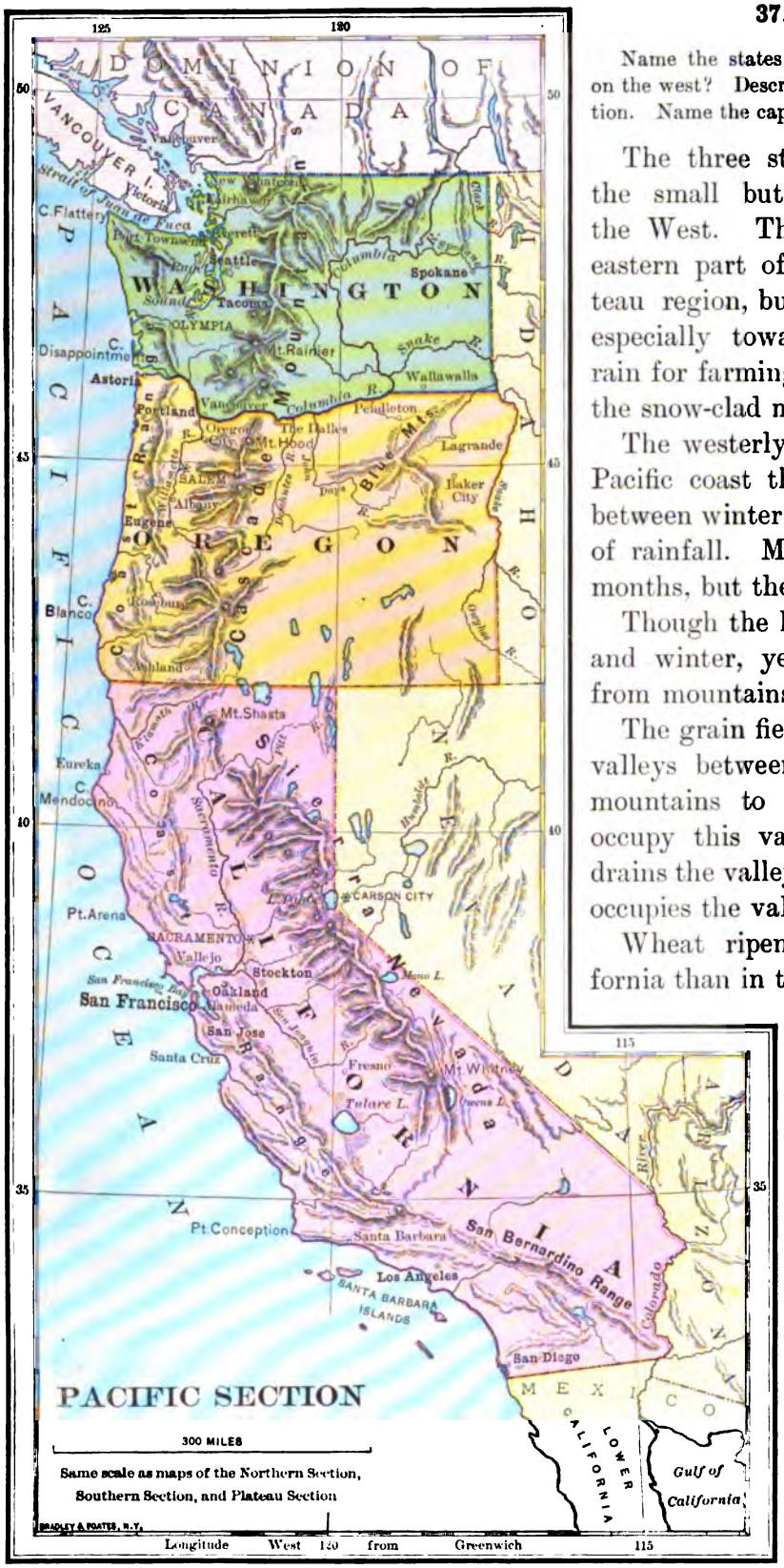
The Plateau Section was settled later than California, and forms the youngest part of our Union, but the people are so enterprising that the new cities of this section contain all the modern conveniences of eastern cities.

TOPICS ON THE PLATEAU SECTION.

I. THE STATES. Their names. Their leading industries. Their chief cities. Their scenery.

II. IRRIGATION. Where the arid regions of the United States are. Why they are arid. How the land is irrigated.

III. THE PRECIOUS METALS. Location of mining regions. How the precious metals are mined. For what they are used.



37. The Pacific Section.

Name the states of this section. By what are they bordered on the west? Describe the surface and the drainage of the section. Name the capital of each state.

The three states of the Pacific coast include the small but fertile food-producing region of the West. The map on p. 40 shows that the eastern part of these states lies in the dry plateau region, but that most of the western part, especially toward the north, receives sufficient rain for farming. In the south the nearness of the snow-clad mountains makes irrigation easy.

The westerly winds so modify the heat of the Pacific coast that there is very little difference between winter and summer except in the amount of rainfall. Most of the rain falls in the winter months, but the summers are quite dry.

Though the lowlands are warm in both summer and winter, yet they are but a short distance from mountains where snow may always be seen.

The grain fields of the Pacific coast are in the valleys between the Coast Range and the high mountains to the eastward. What two rivers occupy this valley in California? What river drains the valley in Oregon? What body of water occupies the valley in Washington?

Wheat ripens earlier in the valleys of California than in the Mississippi basin. The harvesting machine, called a *header*, is pushed before the horses, and clips off the heads of the grain, leaving most of the stalk. The heads fall on a revolving belt that pours them into a wagon, or sometimes directly into the threshing machine.

Much of the grain is shipped to Europe from the ports of San Francisco Bay and Puget Sound.

Fruit is grown in almost every part of the Pacific coast; in southern California it is the chief product. Oranges, grapes, and pears are sent in refrigera-

Vineyard, southern California.

tor cars to the eastern states. But most of the grapes are used to make wine or raisins. Apples, plums, and other fruits are canned and preserved.

Raisin making, southern California.

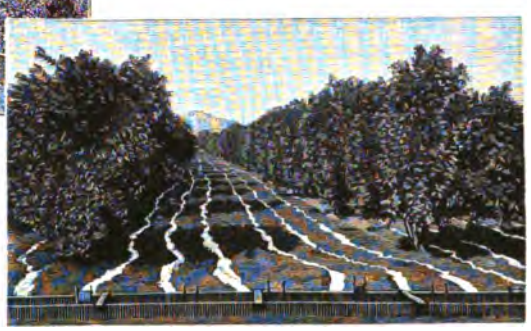
Cattle and sheep are raised in the hilly lands, and much fine wool is produced. In what other regions of the United States is wool grown?

Every year immense shoals of salmon ascend the Columbia and other northern rivers of the Pacific coast. The salmon are caught in nets or weirs; their flesh, cooked and canned, is sold in almost every city of America and Europe. What other part of the United States is largely interested in fisheries?

Our most extensive forests are on the Pacific coast, where the mountain slopes are densely covered with a kind of fir called *Oregon pine*. There are very large lumber mills around Puget Sound, and pine, cedar, and redwood are obtained from the forests of California. Small groves of "Big Trees," a kind of redwood, are found on the west slope of the Sierra Nevada. These trees are taller than a high church spire, and are among the largest in the world.

California once belonged to Mexico. Soon after the United States got possession of it, gold was discovered there, and crowds of people poured in from all parts of the world, so that San Francisco became a large city in a few months. The miners were followed by merchants and farmers, and now the state is rich because of its farms rather than because of its mines. California, however, produces more gold than any other state in the Union. Most of the coal used as fuel in this region is mined in Washington and the neighboring portions of Canada.

Which is the largest state on the Pacific coast? What is its great seaport? It is the largest city on the western coast of America. The gap through which its bay opens to the ocean is called the Golden Gate. Lines of steamships connect it with New York, with



Irrigating an orchard in the arid lands.

Australia, and with Asia. There are more Chinamen in San Francisco than in any other city in the United States. Can you think of a reason for this?

Find Los Angeles. It is the chief market of the fruit and wine region

Yosemite Valley, California.

of southern California. Where is Portland? Ocean steamships ascend the Columbia River to its docks. Where are Seattle and Tacoma? They are important ports. Railways connect all of these cities with the eastern states.

Besides the Indians, who live on reservations in Oregon and Washington, there are also many Chinese in this section, who are employed as laborers and house servants.

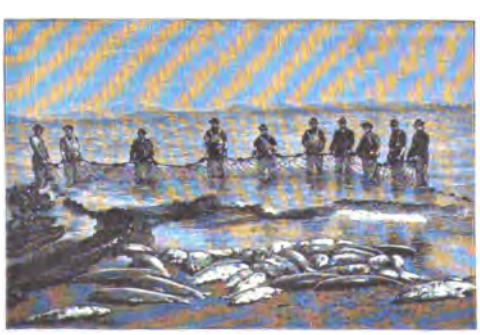
The people of this region have been so busy, first in the gold mines and then on the farms, that manufacture has not yet become a chief industry. Yet the lumber mills about Puget Sound are the largest in the world; there are extensive salmon canneries along the Columbia; the manufacture of wine, the preserving of fruit, and the grinding of flour are extensive industries in California. Among the important manufactures of San Francisco is the refining of the cane sugar grown on the Pacific islands.

The valleys and mountain peaks of these states afford beautiful scenery, particularly the noted Yosemite Valley in California.

Lumbering, Oregon.

Turn to the map on p. 66. In what part of North America is Alaska? By what waters is it nearly surrounded? What strait separates it from Asia? By what great river is it crossed?

Alaska was purchased by the United States from Russia, a country which owns most of northern Europe and Asia. Alaska consists of a great peninsula and a long chain of islands which stretch out between America and Asia like the stepping stones of some mighty giant.



Salmon fishing, Columbia River.

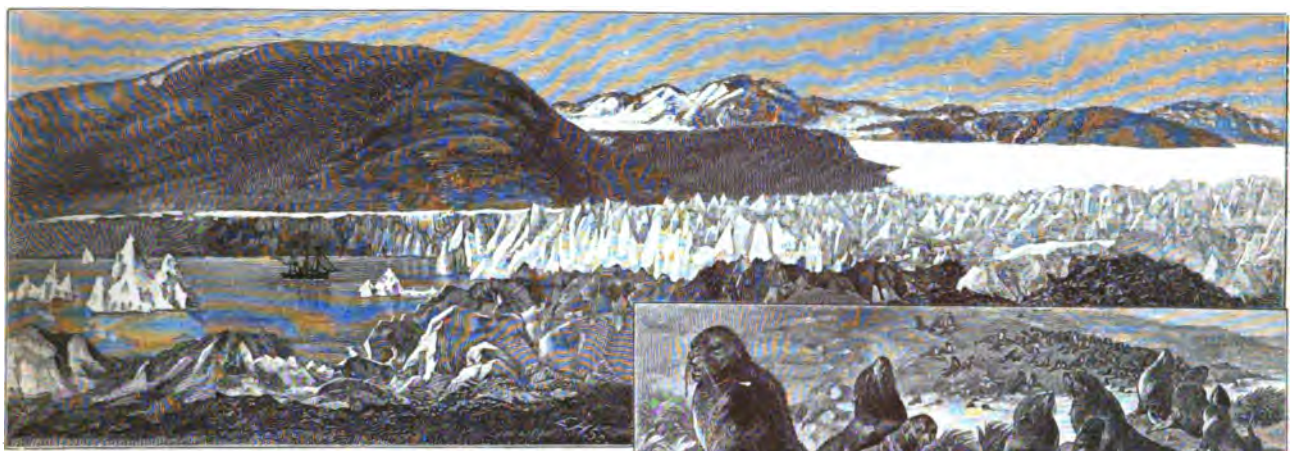
Mount Hood, Cascade Mountains, Oregon.

Southern Alaska is not so cold as the northeast coast of America, for warm southwesterly winds from the Pacific blow over its shores. Yet it is cold and moist enough for much snow to fall. Many of the mountain valleys are nearly filled with snow. It becomes so deep and heavy that its lower part is pressed into a solid mass, which creeps down the valley as a deep, slow-moving river of ice, or *glacier*. When glaciers descend into the sea, huge pieces break off and form *icebergs*.

Where is Mount Logan? It is the highest peak in North America. The mountainous, island-fringed coast of Alaska is very beautiful, and is visited by many travelers.

Where are the Pribilof Islands? Every summer, seals come from the Pacific Ocean to these islands. Here the little seals are born and reared, and taught to swim. Many of the seals are killed here; their fur, and the cod-fish and salmon caught in great numbers along the coast, form the chief products of Alaska. There are rich gold mines on the mainland.

Few white men live in Alaska. Some Eskimos, a queer people of the yellow race, are found in the bleak regions of the north, but most of the natives of the southwest coast are Indians.



Muir Glacier, Alaska.

Seal rookery, Pribilof Islands.

TOPICS ON THE PACIFIC REGION.

I. Pacific Section. Location. States. Climate and rainfall. Principal productions. Chief cities. The Chinese.

II. Alaska. Location. How the United States got possession of it. Climate. Glaciers. Fur trade. Native people.

III. Cities of the Pacific and Plateau Sections. Tell all that you can find out about one or more of the cities in the following list: in what state each is; the surface of the country about it; its routes of commerce; what the neighboring country produces; for what the city is noted.

1. San Francisco
2. Denver
3. Los Angeles
4. Portland
5. Salt Lake City
6. Seattle
7. Tacoma
8. Sacramento
9. Pueblo
10. Helena
11. Cheyenne
12. Butte

MINOR COUNTRIES OF NORTH AMERICA.

38. Canada and Newfoundland.

Look at the map on p. 31. In what part of Canada do most of the people live? Notice what circle crosses the northern part of Canada. It will suggest one reason why so few people live there.

Both north of the Arctic Circle and south of it for a long distance Canada is too cold for the growth of trees, which men could use to make houses, or of vegetables and other plants, which they could use for food. The ground is covered with snow for the greater part of the year, and snowstorms sometimes occur during the few weeks of summer. Further south there are extensive forests, and the winters are not quite so long, nor so cold.

The only people living in this lonely and desolate region are a few scattered families of Eskimos and Indians, who spend their time in hunting and fishing, and who have hard work to keep from starving and freezing to death during the long winters.

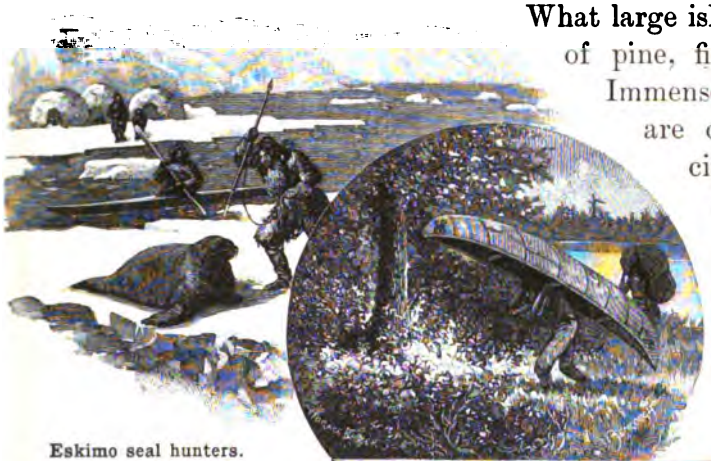
The Eskimos live in winter near the coast, where they can catch seals, walruses, and other sea animals. They live in low dome-shaped huts, built of rocks or of blocks of ice and snow. Men, women, and children dress much alike, in clothing made out of heavy fur. During the short summer these people move inland to hunt the reindeer or caribou, which at that season wanders far north in great herds. The Eskimo eats the flesh of the reindeer, and makes his clothes, his summer tent, and his canoe of the skin of this animal or of that of the seal.

The Indians live further south than the Eskimos, in the region where there are forests, so that they can make huts of poles over which they stretch the skins of animals and about which they pile brush and snow. They get most of their food by fishing and hunting, and they trap the mink, marten, beaver, and otter for their furs. White men have trading houses in this region, where the Indians barter the furs for guns, blankets, and clothing.

There are neither roads nor wagons in this wild country. Are there many rivers and lakes? In summer, Eskimos, Indians, and the white traders travel in canoes, which they carry from one lake or river to another. In winter, when the country is covered with snow

and ice, all loads are carried on sledges drawn by dogs, while the men run alongside on long snow-shoes which prevent them from sinking into the deep snow.

In these ways the furs are sent to the settled parts of the country further south, or to the shores of Hudson Bay; then they are shipped to England and made into muffs, capes, and other garments. These furs are about the only things of value that are sent out from the cold, bleak, and lonely northern part of Canada.



Eskimo seal hunters.

In winter loads are carried in sledges.

In southern Canada the winters are cold, but the summers are long and warm enough for grain, grass, and vegetables to ripen.

Near the Pacific, where the surface is mountainous and the summers are dry, there is little farming, but there are extensive coal mines, and much gold is found.

Where is Lake Winnipeg? Wheat grows in its basin. Most of it is sent to Minneapolis, to the lake ports of the United States, or to Montreal on the St. Lawrence, on its way to Europe. What city is south of Lake Winnipeg? It is a market for farmers and fur traders.

Lumber is obtained north of the St. Lawrence, but on the south side are many narrow farms running back from the river. Vegetables, fruit, and hay are the chief crops. Much freight is carried on the river, but this route is closed by ice in winter.

One of the longest railways in the world connects Quebec and Vancouver. It is part of a trade route between England and Australia.

What peninsula is in the southeastern part of Canada? What large island is northeast of the peninsula? Forests of pine, fir, and spruce cover much of this region. Immense numbers of cod, mackerel, and herring are caught in the ocean near by. Find the city of Halifax. It is the chief harbor and seaport of this part of Canada.

Long ago the valley of the St. Lawrence belonged to France, but just before our Revolution it was taken by the English. The descendants of the early French settlers still live there, and speak the French language.

When we fought against England, the people of Canada did not join us. Canada still belongs to England, but is permitted to govern itself almost entirely, though the chief officer is appointed by the king or queen of England.

Near what river are three of the cities of Canada? What and where is the capital? Where is Montreal? It is the largest city in Canada. Ocean steamships sail up the St. Lawrence to Montreal. What city is a little farther down the river? On what island is Victoria?

Sketch North America and mark off Canada.

TOPICS ON CANADA.

I. Location and Climate.
II. Industries. Wheat regions. Lumber regions. Hunting regions. Fishing region.
III. Trade Routes. Railroads. River. Great Lakes.
IV. People. English. French. Eskimos. Indians.
V. Government.
VI. Cities.

39. Mexico and Central America.

Name the country south of the United States. (See map on p. 66.) What waters east of Mexico? West and southwest? What peninsula in the west of Mexico? In the southeast? What river between the United States and Mexico? What language is spoken south of that river? What land southeast of Mexico?

North America begins to narrow rapidly at the northern part of Mexico, and becomes an isthmus in Central America. Where is Lake Nicaragua? A canal is planned to cross Central America. It is to pass through this lake, and is to be large enough for ships. As the country is rugged, this canal will be difficult to make. Why will it be useful when completed?

Is the surface of Mexico and Central America level or mountainous? Of what region in the United States do these countries form a continuation?

The coasts of these countries are low and level, but a little way from the shore the surface slopes rapidly upward to a high plateau or *table-land*. In what zones are these countries? The lowlands are hot, moist, and unhealthful; the highlands are not so hot, and are very dry.

The table-land is bordered with mountain ranges, so high that many of the peaks are always snow-covered. At times some of them pour out clouds of steam and streams of white-hot melted rock or *lava*. For months their tops may be hidden in clouds of steam, while at night the gleam of the hot lava is so bright that the mountains seem on fire. Such peaks are called *volcanoes;* each is a sort of chimney through which steam and other gases, formed within the earth, may escape.

Mexican volcano, and maguey plant.

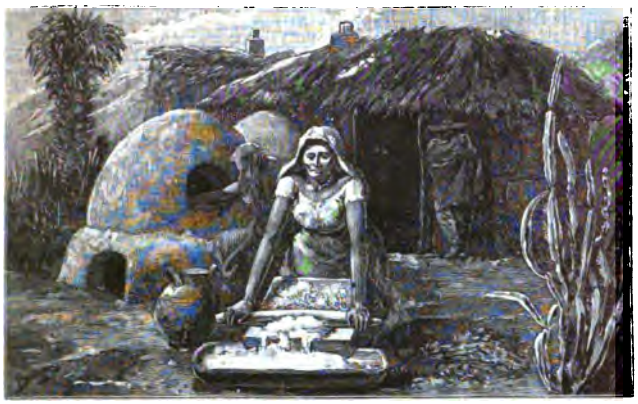
Farming, cattle raising, and mining are the chief occupations. In the hot lowlands are plantations of cotton, sugar cane, coffee, and tobacco, and groves of orange trees and bananas, and of tall, feathery palm trees.

Along the foot and sides of the table-land is a region of tangled forest where monkeys and humming birds are found. In the forests are mahogany trees, the vine bearing the vanilla bean, and the sarsaparilla plant.

Many of the plants of the table-land are like those which we see at home, for the weather, though usually quite dry, is much like that of the temperate zone. In the forests are oak and cedar trees, while corn, wheat, and beans grow on the farms. One of the most useful plants is the *maguey*. This is the same as the "century plant" grown in gardens at home. From its sap a popular drink is prepared; its pulpy roots are used for food; and the fiber of one kind of maguey is used in making twine and coarse bagging.

But the chief wealth of the table-land comes from the silver mines and the herds of cattle and sheep. The Spaniards who first settled these states went there in search of gold and silver, and the mines of Mexico have produced silver ever since. Many cattle raised in Mexico are sent to our markets, and much wool grown

Their houses are often wretched hovels.



Mexicans grinding corn and baking bread.

there is made into cloth in the mills of the United States. Much silver ore from the mines of Mexico is also sent to the United States to be smelted.

More Indians lived in this part of America than in the northern part, and they were not so savage. Many of the Spanish settlers married Indian women, and their children were half-breeds. Most of the people now are half-breeds and partly civilized Indians. The Spaniards and a few of the half-breeds own most of the land and are rich and powerful, but the Indians and most of the half-breeds are poor, ignorant, and wretched. They are the laborers on the farms and in the mines, and are little better off than slaves.

The people who work on the farms live in villages and towns. Their houses are often wretched hovels; a hole through the wall answers for a window, and the hard ground for a floor. The walls are built of straw, or of sun-dried brick called *adobe*, and the roofs are covered with tiles or with coarse grass.

Indian corn and beans are the food of most of the common people. The beans are cooked with red pepper pods. The corn is ground by hand between two pieces of stone, into a coarse meal. It is then made into a dough, and thin pieces are laid in a very hot clay oven to bake.

Following the example of the English colonists, the descendants of the Spanish settlers freed themselves from the mother country. Mexico is a republic, and Central America contains several small republics.

What is the capital of Mexico? It is the largest city. What important seaport is on the Gulf of Mexico? What is the name of a seaport on the Pacific coast?

TOPICS ON SPANISH NORTH AMERICA.

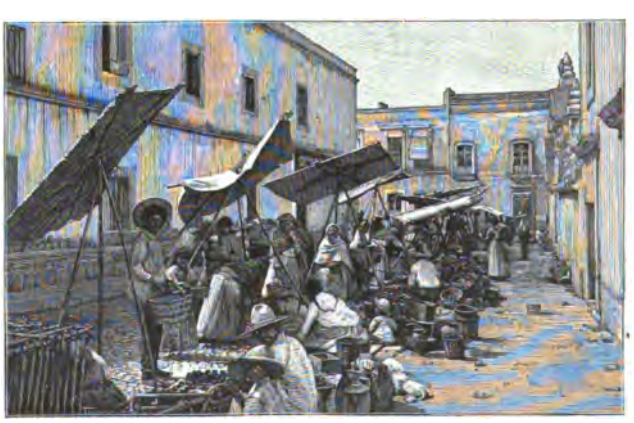
I. COUNTRIES. The larger. The smaller.
II. SURFACE AND CLIMATE.
III. PRODUCTIONS. Of the mines. Of the plantations. Of the forests. Cattle.
IV. PEOPLE. Ancestors. Language. Food. Houses.

40. West Indies.

What group of islands southeast of North America? Name the four largest. What group east of Florida forms part of the West Indies? What sea between the West Indies and South America? In what zone are most of the West Indies?

The West Indies are so cooled by ocean breezes that they are neither so hot nor so unhealthful as the lowlands of Central America; but at times they are visited by terrible windstorms, or *hurricanes*, which blow down buildings and sink ships.

The Bahamas are low, sandy islands surrounded by shallow waters, but the larger islands of the West Indies are the high and rugged tops of a range of mountains whose lower part is covered by the ocean.



Market scene, Mexico.

It was on one of the Bahama Islands that Columbus first landed; therefore the Spanish claimed the West Indies. They made slaves of the Indians and worked them to death, and then negro slaves were brought to the plantations. Now there are more negroes than white people in the islands, but they were all set free many years ago.

Cuba and Puerto Rico belong to Spain; most of the other islands belong to England; but Haiti is occupied by two independent negro republics.

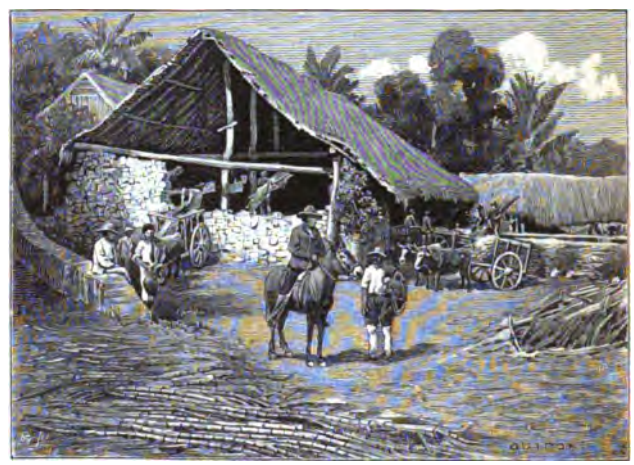
Many of the islands are surrounded by coral *reefs*. These are low rocks made by the coral animals, or *polyps*. They are found in many parts of the sea where the water is clear, warm, and not too deep.

The polyps live in great colonies and are attached to the bottom of the ocean. When they die their stony skeletons are left as a rocky mass, while other polyps grow, like buds on a branch, from the foundation thus left. In this way the rocky mass gradually grows upward to the surface of the water, where it forms a ragged reef of coral rock. By the aid of the sand piled up by the waves and the winds, reefs are sometimes built up above the surface of the water to form low coral islands. There are many such coral reefs and islands in the warmer parts of all the oceans. Some coral islands form a nearly complete ring, partly inclosing a portion of the sea. Such islands are called *atolls*.

Young palm trees, West Indies.

In the shallow waters of the Bahamas, sponges are found. Tell some uses of sponge. The sponges which you all have seen are the skeletons of jellylike animals which fasten themselves to rocks and feed on what the waters bring them.

On the lowlands of the West Indies palm trees grow; mahogany and a very hard wood, called *lignum vitæ*, of which tenpin balls are made, grow on the higher slopes.



Sugar mill in Cuba.

Much of our sugar is produced in Cuba. It is made from the sugar cane, which looks much like a corn stalk, but has a sweeter sap. The cane is taken to mills, where the sap is squeezed out between heavy rollers. The sap is then boiled until it becomes brown sugar. This "raw" sugar is sent mostly to the United States, where it is refined into white sugar.

Much of the finest tobacco also comes from the West Indies. Coffee, bananas and other tropical fruits grow in these islands. From the Bahamas pineapples and oranges are shipped to our eastern cities.

Where is Havana? This is the capital of Cuba, and is a great sugar and tobacco market.

TOPICS ON THE WEST INDIES.

I. Islands. Large. Group of small.
II. Climate.
III. Productions. Sugar. Tobacco.
IV. History and Government.
V. Havana.

CORRELATIONS AND COMPARISONS.

Climate. — In what zones is North America? In which zone is the United States? In which zones is Canada? In which is Mexico? In which zone is Central America? In which of these countries as a whole is the climate pleasantest for white men? Why? Which is the most flourishing country of North America? In which part of Canada do most of the people live? Why? In which part of Mexico is the climate moderate? Why? In what region of Mexico do most of the people live? Why? Is the larger island group north or south of North America? Which group is more valuable? Why? Follow with your pencil the water connection between the Atlantic and Pacific oceans north of North America. Is it used by vessels? Why? What connection is being made by man between these oceans? Where? What great bay on the north coast of North America? What great gulf on the south coast? Which is more frequented by vessels? Why? What are the four great rivers east of the Rocky Mountains? Which is most useful? Which is least useful? Why? What three river systems have large lakes? On which of these lakes are cities built? Why? On which are there no great cities? Why?

Position and Coast. — With what grand division does North America trade across the Atlantic Ocean? With what grand division does she trade across the Pacific Ocean? In which of these grand divisions are the people more advanced in civilization? To which are the Americans more closely related? How? Which ocean is the broader? On which coast of North America are there more gulfs and bays? On which coast are there more seaports? Give several reasons for this. Which grand division of the Eastern Hemisphere approaches the closer to North America? What strait between North America and Asia? Why is there not much trade across this strait?

Surface. — Where is the continental divide of North America? Into what two slopes does it divide North America? What region of North America is high? What region is low? What region is moist? Why? What region is dry? Why? Into which ocean do most of the rivers flow? Why? In which portion is agriculture a chief occupation? Why? What limits agriculture on the north? What is the great grazing region of North America? Why is it a grazing region? What is the chief wealth of the mountain region of the West? Why did people go to the Pacific coast of North America? What are at present the chief occupations in that region? Why? What are the highlands of eastern North America? What minerals do they contain? What are the natural trade routes from the coast to the center of the continent of North America? What is the great barrier to trade across the continent? How is this barrier crossed? Why is the Mississippi valley productive? What are the chief crops raised in its northern part? In the southern part? In what direction do the rivers of the Atlantic coast plain flow? Why? What are the products of this plain? What are the products of the St. Lawrence valley? What are the advantages of the upper part of the Mississippi valley for manufacture? What are the advantages of the coast plain for manufacture? What are the products of the western highland in the United States? In Mexico and Central America?

Products. — Sketch an outline of North America, and write in the proper places the names of the vegetable products found there. Forests: oak, pine, cedar, redwood, mahogany; grains: wheat, corn, rice; market vegetables; fruits: pears, oranges, grapes, bananas.

On another sketch write in the proper regions the names of the minerals found there: iron, coal, salt, copper, petroleum, natural gas, gold, and silver.

On another sketch write the names of the following products. Fibers: wool, cotton; animals: cattle, hogs, sheep; fish; tobacco.

Cities. — Sketch an outline of North America, and write in the proper places the names of the great manufacturing cities, with the name of the chief manufacture of each. Write the names of the capitals and chief seaports in a similar map.

Governments. — In what state do you live? What is its capital? Why is it placed where it is? Who is the governor? What is the capital of the United States? Who is the president? What is the government of the United States called? What is the government of Canada? The capital? What is the government of Mexico? Its capital? What is the form of government in the Central American states? What people lived in America when the white men discovered it? What people mostly settled the United States? What peoples settled Canada? What people settled in Mexico and Central America? In what regions do the Indians live now? Where do the Eskimos live? Name other races found now in North America. Where did each come from? Do the English-speaking or the Spanish-speaking people of North America occupy the larger territory? Which other country of North America is more like ours in manners and customs? Which is more like ours in government? Are the English-speaking or the Spanish-speaking people of North America more progressive?

SOUTH AMERICA.

41. Location, Size, and Shape.

Turn to the map on p. 10. What direction is South America from North America? How are they connected?

SOUTH AMERICA. (Same scale as maps of North America, Eurasia, Africa, and Australia.)

Here is a map of South America on the same scale as the maps of North America on pp. 22 and 66. What ocean is east of South America? What ocean is west? What sea is north of South America?

Balboa, a Spanish follower of Columbus, crossed the Isthmus of Panama on foot and discovered the Pacific Ocean. People now cross the isthmus on a railroad which carries passengers and goods from one ocean to the other. Several attempts have been made to build a ship canal across the isthmus, but so far they have not been successful.

Vessels going around the southern part of South America are said to "round the Horn." Why? What large island is south of South America? What strait is north of Tierra del Fuego? This strait was named after the man who commanded the first expedition that sailed around the world.

When Magellan entered the strait in October, the signs of spring were just appearing. In what month does spring begin where you live? In what zone do you live? Explain why it is that in the Strait of Magellan spring begins in October.

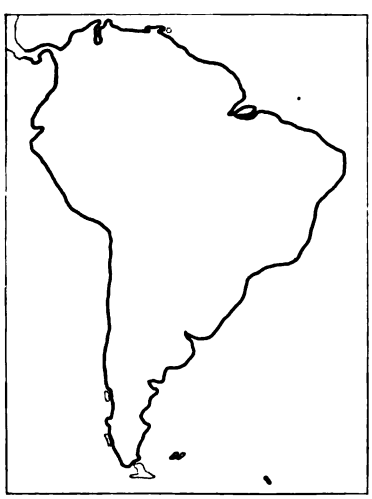
Compare this map of South America with that of North America on p. 22. Which grand division is the larger? How does the greatest width of South America compare with its length?

An almost unbroken mountain wall.

What is the general shape of South America? Which side is longest? Which is shortest? What is the general direction of the Pacific coast line? Of the north Atlantic coast line? Of the south Atlantic coast line?

Which has the greater number of gulfs and bays, North America or South America? Where is the Gulf of Guayaquil? Lake Maracaibo is a gulf rather than a lake. The mouths of two rivers on the east side of South America widen out into bays. Name the rivers.

Near what part of South America are most of the islands? Find the Falkland Islands. Where is Trinidad Island? It contains a large lake of pitch or asphalt. Much of the asphalt used for our street pavements comes from this island. Just north of Trinidad is the island about which the story of Robinson Crusoe was written.



Sketch an outline of South America again and again until you can make a good outline in two minutes.

LOCATION, SIZE, AND SHAPE OF SOUTH AMERICA.

I. LOCATION. Waters surrounding. Circles crossing.
II. SIZE. Compare with North America. Breadth and length.
III. SHAPE. General. Coast lines: names; description.

42. Relief.

How many mountain chains are comprised in the Rocky Mountain highland of North America? What are the names of these chains? They are broken by many mountain passes. What is a mountain pass?

South America has an almost unbroken mountain wall along its western border. What is its name? From what point and to what point does it extend? What is its general direction?

Where is the Andes highland broadest? Where is the Rocky Mountain highland broadest? Which of these two highlands is the broader? The broadest part of the Andes highland is called the plateau of Bolivia. Find it on the map. It is nearly twice as high as the much broader plateaus of the Rocky Mountain highland.

In the central part of the Andes highland there are two main ranges of mountains, one on the eastern and the other on the western border of the plateau of Bolivia. In the northern part of the grand division the highland divides into several ranges, while south of the plateau of Bolivia it has only one main range.

Although the Andes highland is not so

broad as the Rocky Mountain highland, its ranges are much higher. They are so high that even in the hot zone many of their peaks are covered with snow all the year.

Many of the Andean peaks are volcanoes, built up in part by the lava thrown out from their tops. At times the ground in these highlands shakes so violently that buildings

Llamas are a little larger than sheep.

are thrown down, and many people are killed. What are these shocks called?

The Andes have long been noted for mines of gold, silver, and copper; and the high slopes and plateaus afford pasturage for sheep, cattle, and several kinds of llamas.

Llamas are woolly animals a little larger than sheep. They are now found only in or near the Andes, though ages ago they lived also in North America. It is thought that the camel of the Eastern Continent is descended from the llama. Like the camel, the llama can live for several days without food or drink. Llamas are used to carry packs of merchandise in the Andes, and flocks of a smaller kind are kept for their fine long wool.

One of the largest of birds, the condor, is also found only in the region of the Andes. It stands higher than a table, and from tip to tip of its outstretched wings is twice as long as a man. It prefers dead animals for food, but when hungry sometimes kills and eats a sheep or a deer.

From the Andes highland the country slopes east toward the Atlantic Ocean and west toward the Pacific. Which is the longer slope?

Do the highlands in the eastern part of South America look as high as the Andes? These eastern highlands are quite low and are traversed by low mountain ranges. What is the name of the small northeastern highland? Of the larger southeastern highland?

Is the surface of South America between these highland borders level or mountainous? Compare it with the great central plain of North America. Each is a broad lowland plain with high mountains on the west and low ranges on the east.

Model South America, showing the Andes, the plateaus of Brazil and Guiana, and the central plain.

RELIEF OF SOUTH AMERICA.

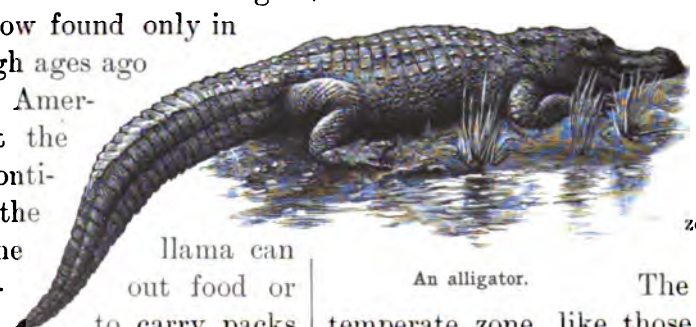
I. Andes Highland. Compared with Rocky Mountain highland: in position; in direction. Describe: length; height; passes; peaks. Plateau of Bolivia.

II. Atlantic Slope. Extent. Where it is broken by mountains.

III. Pacific Slope.

43. Drainage.

In what zone is most of North America? From what direction do the winds generally blow in the north temperate zone?



An alligator.

The winds of the south temperate zone, like those of the north temperate zone, blow generally from the west. From what waters, then, do the rain clouds of the southern part of South America come? On which side of the southern Andes is there most rainfall? Why? Why is there so little rainfall on the east side?

The winds of the torrid zone blow generally from the east. Remembering that the eastern highlands of South America are not very high, tell the whole story of the way the rain falls in the northern part of South America. If you cannot tell this story well, study again about rainfall, on pp. 39, 40.

The central plain of South America, from the Caribbean coast almost to Cape Horn, is even more level than the great central plain of North America, and, like it, is crossed near the central part by a swell of land. What two large river systems of South America does this low elevation separate?

What river drains the most northern part of the great plain? In what direction does this river flow? What slopes does it drain? It is deep enough for large vessels for many hundred miles from its mouth. Its broad, flat valley is called the *llanos*, the Spanish word for "plains."

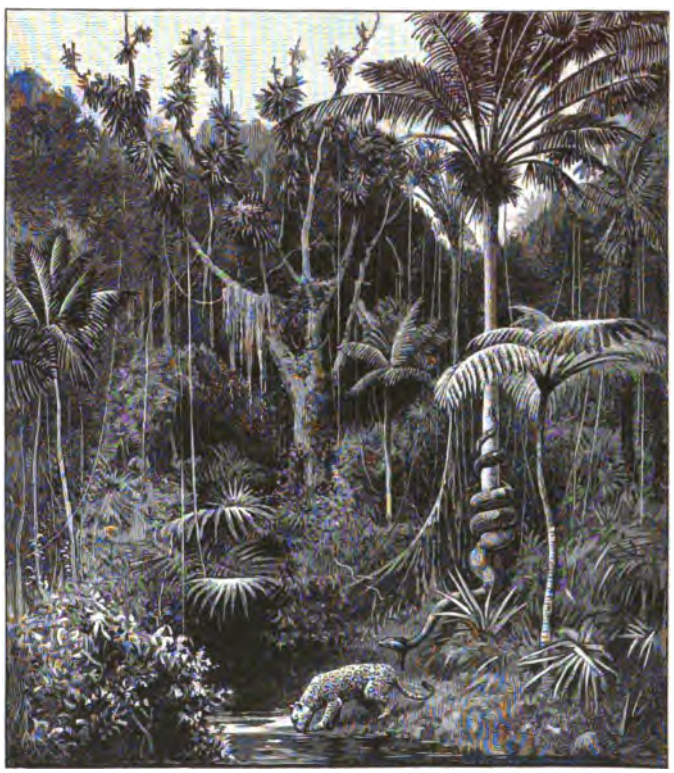
In the rainy season millions of cattle and horses graze on the llanos. The streams are flooded with water, and the swamps are fairly alive with alligators.

With the coming of the dry season the cattle seek the hills, the alligators bury themselves in the mud, and the whole region becomes dry and brown.

What is the name of the longest river in South America? Near what circle is it? In what direction does it flow?

Most of the rain of South America falls in the Amazon basin. Why? This makes the Amazon the largest river in the world, though it is not the longest. Many miles from its mouth it is several miles wide, and steamers can ascend the river nearly to the foot of the Andes.

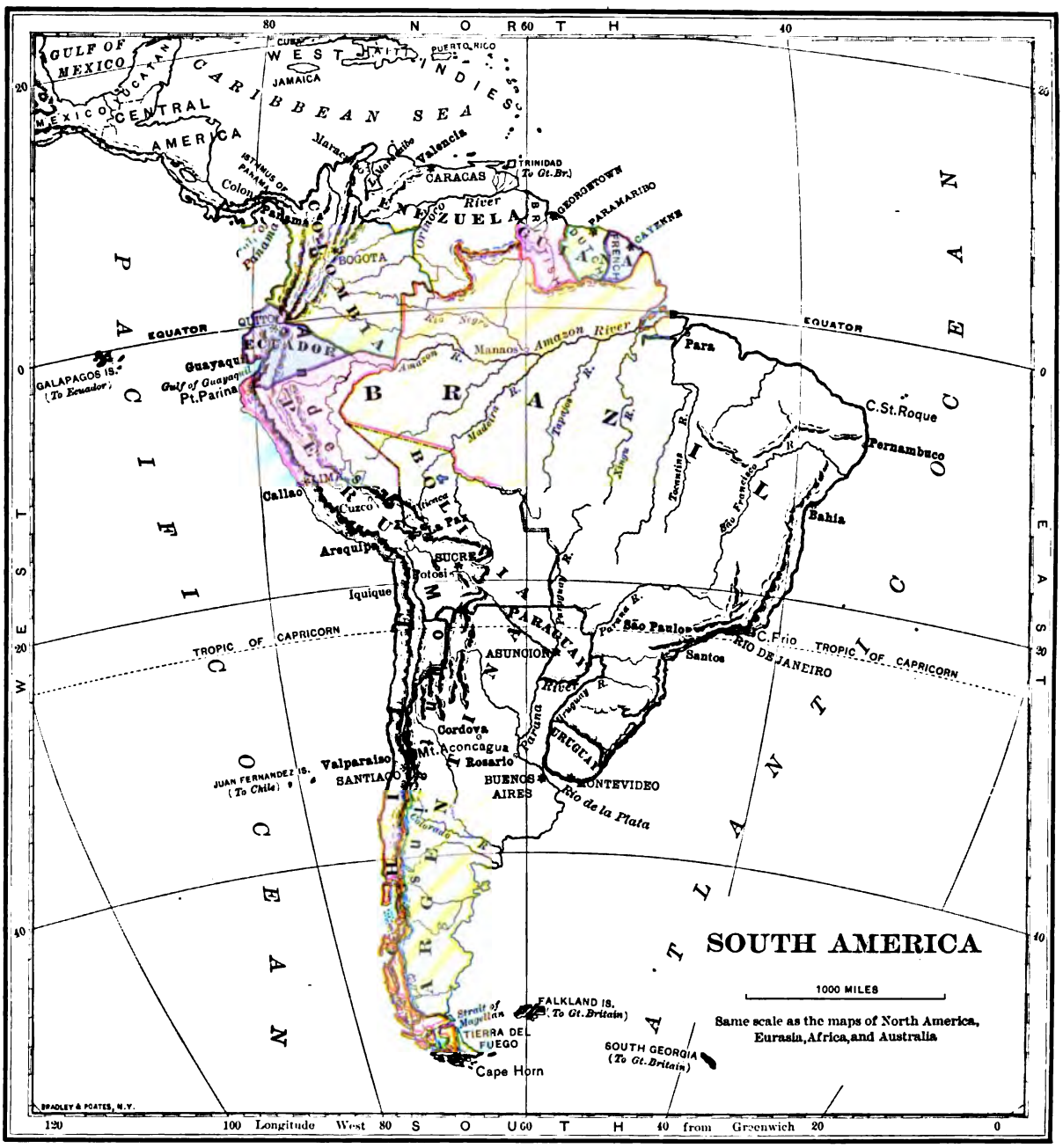
On which side of the Amazon are most of its branches? Name the longest. Name a northern branch. Can you find a channel that connects the Orinoco and the Rio Negro?



These forests are full of wild animals.

The plains of the Amazon are called *silvas*, which means "forests." Dense, dark forests cover the whole country. Once or twice a year the rivers overflow their banks, and hence a great part of the silvas is always swampy. In this part the tall trees are matted together by hanging vines and air plants, while high ferns, mosses, and other plants fill the spaces between the trunks with vegetation which is always green. Boats on the rivers are the only means of travel. These forests are full of wild animals, most of which are climbers. The great catlike jaguar is the fiercest. The immense boa constrictor coils around his prey and crushes it. Both of these animals are shown in the picture. Troops of monkeys live and travel long distances among the tree tops. These forests yield rubber, mahogany, and dyewoods.

What large river system is south of the Amazon system? Where is the Parana River?



The Paraguay? The Uruguay? The basin of Rio de la Plata or La Plata River is about as large as the Mississippi basin. Its rivers are navigable for many hundred miles.

That part of the central plain drained by the La Plata is called the *pampas*. Its southwestern part is an arid region. Why is it dry? In the northeast, however, enough rain falls for the growth of grain and fruit. Almost the whole region is covered with long grass, with feathery white plumes. It contains the best herding grounds, and is the chief wheat-growing region of South America.

Find the São Francisco River. It is a highway of trade, and many people live in the lower part of its basin.

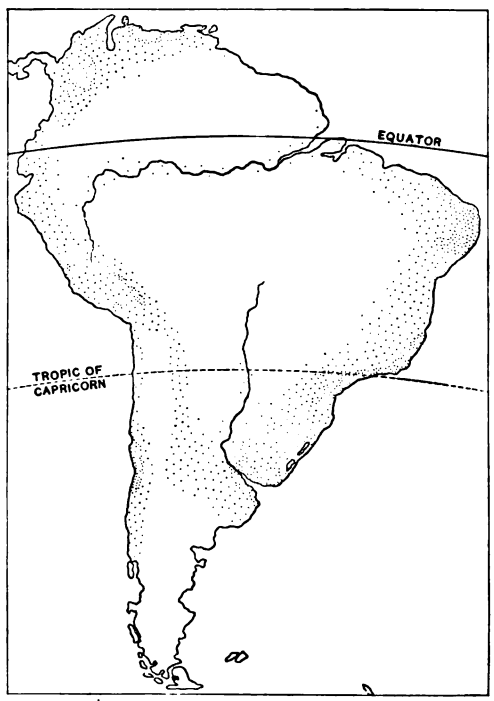
Sketch South America; locate the Orinoco, Amazon, and La Plata rivers.

PLAINS OF SOUTH AMERICA.

I. CENTRAL PLAIN. Location. Extent. Compare with central plain of North America.
II. LLANOS. Drainage. Seasons. Life.
III. SILVAS. Drainage. Rainfall. Forests.
IV. PAMPAS. Surface. Climate. Life.

44. People.

There are fewer people in South America than in any other grand division except Australia. What parts are nearly uninhabited? The most thickly settled regions are about the mouth of the La Plata and northward along the east coast.



The dots show where the most people live.

Much of the land in the interior cannot easily be cultivated. Why? Why is the region east of the Andes in the south sparsely peopled? Where is a belt of settled country extending across the continent? In what zone is the main portion of this belt? In what river basin is the greater part? It is rapidly becoming the most thickly settled part of South America.

When first visited by white men, South America was inhabited only by Indians. Most of the Indians were savages, but those in Peru, called Incas, were partly civilized. They wove coarse cloth, made pottery, and built excellent roads. Where is Peru?

There are still many wild Indians in the interior of South America. Most of them live in the region of the silvas, but some live among the mountains and some in the desert region of the south. Those along the Amazon hunt and fish. They use two kinds of weapons, a spear for killing fish and turtles, and a blowgun with poisoned arrows for birds and other game. Those in the south live chiefly by hunting the *guanaco*, a kind of llama which wanders in great herds over the arid plains.

When it was learned in Europe that gold and silver were to be found in South America, a great many people went there to make their fortunes. Most of them went from Spain or Portugal, a country adjoining Spain.

The Spaniards took all the Andes highland portion of South America and most of the pampas. Many of the people now living there are the white descendants of these Spanish settlers, but the laboring classes there, as in Mexico, are mostly half-breeds of Spanish and Indian parentage.

Name all the countries of South America crossed by the Andes Mountains. Name the capital of each. In what respect are all these countries alike? Which one has no seacoast? Which are crossed by the equator? What two small countries are east of Argentina? In Uru-

The pampas contain the best herding grounds of South America.

guay and Paraguay, as in Argentina and the Andean countries, the Spanish language is spoken.

The Portuguese settled the eastern part of South America, and their descendants, both whites and half-breeds, still live in Brazil, and speak the Portuguese language.

Many negroes live in Brazil, and with the half-breeds form the laboring class. They were held as slaves until a few years ago.

All the South American countries were at first under the control of European nations, principally Spain and Portugal; but one by one they rebelled against the mother countries, until now Guiana only is held by European powers. All the other countries are republics.

Drying coffee.

The chief hero in the South American revolutions was Simon Bolivar, often called "the Washington of South America."

With both the Spanish and the Portuguese settlers came many Catholic priests, who established missions and schools among the Indians; and to-day the Roman Catholic is the prevailing form of religion in South America.

PEOPLE OF SOUTH AMERICA.

I. INDIANS. Former condition. Present condition.
II. SPANIARDS. Spanish South America. Countries.
III. PORTUGUESE. Portuguese South America. Country.
IV. NEGROES.
V. LANGUAGES OF SOUTH AMERICA.
VI. FORM OF GOVERNMENT.

45. Brazil and Guiana.

Locate Brazil. Describe its surface. What rivers drain it? In what zones is it? Beginning with Guiana, name the countries that border Brazil.

Brazil is about as large as the United States, and contains nearly half the people in South America.

Brazil exports many things, such as rubber, cotton, sugar, tobacco, and hides, but it is

Picking coffee.

especially noted for its coffee. It produces about as much coffee as all the rest of the world.

Coffee grows on a tree bearing a beautiful purple berry which contains two seeds. The ripe berries are gathered two or three times a year and thrown into vats, where the pulpy part is washed away from the seeds. The seeds are then dried, packed in sacks, and sent to the market, as coffee.

The coffee plantations are in the warm plateau region of southern Brazil. Where is Rio de Janeiro? The name means "River of January." It is the capital and largest city of Brazil, and is named after a little river on which it is situated. The river is so called because it was discovered one summer day in January. Can you guess why Brazilian coffee is called *Rio* coffee? Most of the coffee shipped from this port comes to the United States.

In the narrow and crooked streets of Rio de Janeiro may be seen many negroes — men,

women, and children — carrying burdens of all kinds balanced on their heads. On the outskirts of the town are handsome residences overlooking one of the most beautiful harbors in the world. The bay is nearly surrounded by high hills, where the wealthy citizens take refuge during the summer when the yellow fever prevails in the city.

Where is Santos? Much coffee is also shipped to our country from this port.

Where is Pernambuco? There are sugar plantations in this region.

Where is Bahia? Sugar and tobacco are its chief exports.

Rubber is an important product of Brazil. It is gathered by the Indians of the silvas, in the swampy forest. With his hatchet the Indian cuts a gash in the bark of a rubber tree; then with a piece of clay he fastens a little cup to catch the milky sap that slowly trickles out. When he has gashed about a hundred trees, he collects the sap from the cups. Next he builds a fire of palm nuts, and, dipping a wooden paddle into the sap, holds it in the thick smoke of the burning nuts until the sap has become hard and elastic. This hardened sap forms the rubber of commerce.

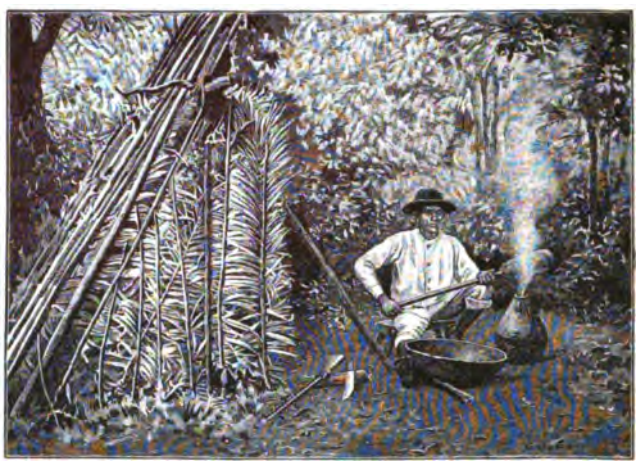
Where is Para? Nearly all the rubber is sent from Para to the United States and Europe, where it is used for bicycle tires, car springs, overshoes, and hundreds of other things.

Collecting the sap.

The Brazil-nut tree and the cacao tree grow in the silvas. The fruit of the cacao is a bean from which cocoa and chocolate are made. Manioc, the root from which tapioca is made, is also a native of Brazil. All these products are shipped to Europe and the United States.

Where is Manaos? It is the largest town in the interior of Brazil.

Guiana is much like Brazil in surface and climate. The English own one part, the French another, while the third part is owned by another



Smoking the rubber.

European people called the Dutch. The planters are white; many of the laborers are negroes. France sends criminals to French Guiana as a punishment. Sugar, gold, and cocoa are the chief exports. Find the capital of each division.

Sketch South America; show Brazil and locate Rio de Janeiro.

PRODUCTS OF BRAZIL.

I. Coffee. What it is. Location of the coffee plantations. Chief ports for shipment of coffee. Country to which most of it is shipped.
II. Sugar. The sugar plantations.
III. Rubber. What it is. How gathered. For what used.
IV. Other Products.

46. Argentina and La Plata Countries.

In what zone are the pampas? What river system drains this plain? In what direction does the plain slope? What mountains west? What are the products of this region? What three countries in this great plain? Which of these is the largest? Which has no seacoast?

Next to Brazil, Argentina is the largest and richest country of South America. Every year many thousand people come from Europe to make their home in its grain-growing lands,

and there are more white people there than in any other country of South America.

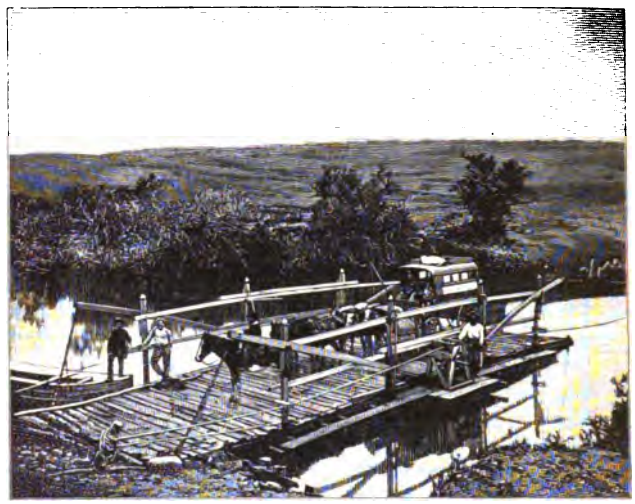
The herdsmen of the pampas are called *gauchos*, and are of mixed Spanish and Indian blood. There are no better horsemen in the world, and none more skillful with the lasso.

The herds of cattle and sheep form the chief wealth of the country, and great quantities of live cattle, packed meat, beef extract, tallow, hides, and wool are shipped to Europe.

The farms are mainly in the river valleys in the north, from which the wheat can be easily carried to the markets by vessels, but railways have been built to many of the farming districts. There are more miles of railway in Argentina than in any other South American country. One line crosses the continent. Argentina exports nearly half as much wheat as the United States, mostly to England and France.

The herds form the chief wealth of Argentina.

In Paraguay and Uruguay cattle raising is the chief pursuit, though Uruguay also produces large crops of wheat. An important industry in Paraguay is the gathering, curing, and shipping of the leaves of a kind of holly, called *maté*, which are widely used in place of tea in all the southern part of South America.



A ferry in Uruguay.

What is the capital of Argentina? Its name means "good air," but the city is not very healthful. It is the largest city of South America, and a great commercial center. Channels have been dredged in the shallow harbor, so that steamers can now come up to the wharves. In the crowded streets and showy shops are heard many languages, for one quarter of the people are foreigners. Where is Montevideo? It is the capital and largest city of Uruguay. Lines of steamships connect both cities with seaports of the United States and Europe. Find the capital of Paraguay. In most of the large cities of the pampas there are electric lights, telephones, schools and colleges, and newspapers.

Sketch a map of South America; show Argentina, Paraguay, and Uruguay.

Steamers can now come up to the wharves of Buenos Aires.

ARGENTINA AND LA PLATA COUNTRIES.

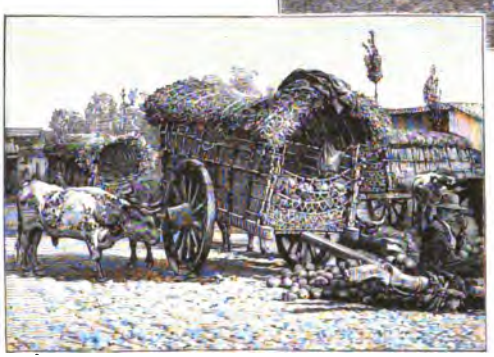
I. Location and Boundaries.
II. Surface and Drainage.
III. Climate and Rainfall.
IV. Vegetation and Animals.
V. Cities.

Read what is written about the pampas on p. 76.

47. Andean Countries — Chile.

What country of South America forms a long, narrow strip on the western slope of the Andes? What countries east, and what water west, of it?

There are many short streams flowing down the western slope of the Andes in Chile. In the fertile valleys of these streams are many farms. Some of the streams never reach the sea, for their water is carried in a maze of ditches to irrigate the farms. The mountain slopes of southern Chile are covered with heavy forests.



Farm carts in Chile.

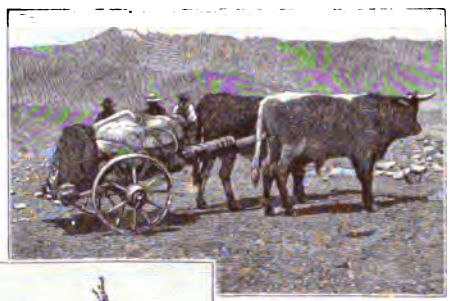
As in the other countries of the Andes, grain, wool, fruit, and silver are produced, but the chief wealth of Chile is "nitrate" or saltpeter, from which gunpowder is made and which is used in Europe as a fertilizer. It is dug from old lake beds in the desert region of the north.

Where is Iquique? Most of the saltpeter is shipped from this port.

There are fewer people in Chile than in some of the other countries, but they have made their country one of the most powerful in South America. Their schools and colleges are excellent.

Where is Santiago? Earthquakes are frequent there, and most of the houses are low, with thick walls made of *adobe*. There are many beautiful streets and parks, and many of the public buildings are large and imposing. Find Valparaiso. It is the largest seaport on the western coast of South America. A railway connects this town with Buenos Aires.

Sketch South America; show the location of Chile.



A mountain cart.

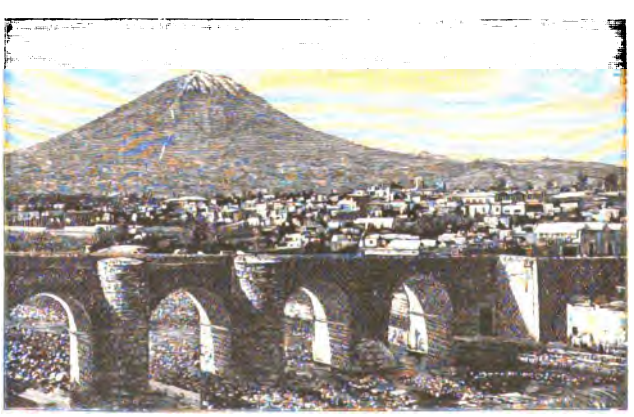
CHILE.

I. Location and Boundaries.
II. Saltpeter. Where found. Where taken. How used.
III. People.
IV. Cities.

48. Northern Andean Countries.

Name the five northern Andean countries. In what zone are they? In what zone is the greater part of Chile? On which slope of the Andes is Chile? On which slope is Bolivia? The other Andean countries? What great river system receives drainage from the eastern part of all the northern Andean countries? Why has the greater part of Chile abundant rainfall? Which side of the northern Andean countries receives the greater amount of rainfall? Why?

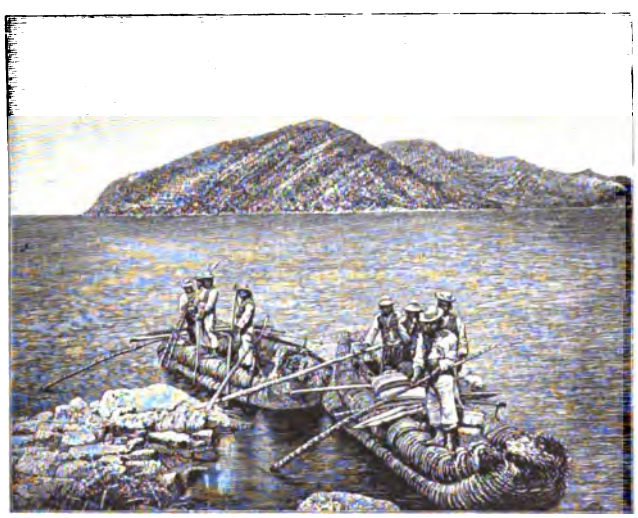
The northern countries of the Andes are much alike in surface and climate. In each, the Pacific coast is a hot, dry region crossed by short mountain streams. The Andes in each country contain many volcanic peaks so high that, although in the torrid zone, they are always capped with snow, while the plateau is so high that its climate is delightful. The broad eastern slope in each country extends into the moist lowlands of the silvas or the llanos.



Arequipa, Peru, and the volcano Misti.

In spite of the dryness of the western slope, more people live there than in the fertile lands east of the mountains. The short mountain streams have wide valleys, and furnish water to irrigate the farms, which produce abundant crops of sugar, coffee, and cotton. Between these irrigated lands are hot deserts covered with hillocks of drifting sand.

The Incas lived on the high plateaus of the central Andes. Where is Cuzco? It was the capital of the Inca empire, and was surrounded by thick walls of stone. Within was the Temple of the Sun, to which pilgrims came from every part of the empire. On an island in



Native boats on Lake Titicaca.

Lake Titicaca was another temple almost as magnificent.

After a savage war the Spaniards conquered the Incas, so that little by little their great empire melted away. But a few of their descendants still live in this region. They are skillful weavers of woolen cloths, and own herds of llamas and cattle.

Lake Titicaca is nearly half as large as Lake Ontario. Travelers now cross it in steamboats, but the natives use boats woven of rushes.

Next to Chile, Peru is the leading country of the Andes. It lies mainly in the high plateau. Sugar, silver, cotton, and wool are the chief

Native houses in Ecuador.

products. The cinchona tree, from the bark of which quinine is made, grows on the eastern slope of the Andes. Find Lima. It is the capital and largest city. What is the name of its seaport?

What country of the Andes has no seacoast? Some of its products go to Buenos Aires to be sent abroad. Silver, rubber, and cinchona bark are the chief exports. La Paz is the largest city. Sucre is the capital. Potosi is in the midst of silver mines.

One of these countries has the Spanish name for "equator." Why? It is the smallest country of the Andes. Cocoa is the chief product. Where is Quito? Eleven snow-capped peaks can be seen from its public square. What is the chief seaport?

Most of the trade of Colombia is on the Atlantic coast. A railway crosses the Isthmus of Panama. What is its use? Coffee, silver ore, and cocoa are the chief goods sent to for-

Natives weaving cloth in Colombia.

eign countries. What is the capital of Colombia?

Many years ago, a Spanish sailor found, in Lake Maracaibo, a village whose houses were built out in the water on posts. Because Venice, a city of Europe, is built out in the water in somewhat the same way, he called the village Venezuela, or "little Venice," and this finally became the name of the country. Coffee, cocoa, gold, and hides are the chief products. Caracas, the capital, and Valencia are the largest cities.

Sketch South America; show the northern Andean countries.

NORTHERN ANDEAN COUNTRIES.

I. Location and Names.
II. Surface and Climate. The high plateau. Western slope. Eastern slope.
III. Products.
IV. People.
V. Cities.

CORRELATIONS AND COMPARISONS.

Location. — What isthmus connects the two grand divisions of the Western Continent? How do these grand divisions compare in size? How far north does North America extend? How far south does South America extend? Which grand division extends farthest east? West? Where do the tropics cross each? What countries included between the tropics?

Shape. — What is the general shape of each of the Americas? In what respects are their Pacific coast lines alike? In what respects is the northern coast line of North America like that of South America? In what ways is it different? Where are the ice-bound coasts of the Western Continent? Which of the Americas has more islands? More peninsulas? More good harbors? The longer coast line?

Surface. — In what respects are the Americas alike in relief? In what part of each is a great highland region? A great plain?

Compare the Andes highland with the Rocky Mountain highland in extent; in height; in width; in mountain ranges.

Compare the great central plain of South America with that of North America in size; location; height; water partings.

Compare the Brazilian plateau with the Appalachian plateau in shape and location. What small plateau in South America corresponds in position with the plateau north of the St. Lawrence in North America?

Drainage and Climate. — What three large rivers drain the Atlantic slope of South America? Which one corresponds in position to the Mississippi in North America? In what respects are the basins of these two rivers alike? What grain is a leading product of each? How does the Amazon basin compare with the Mississippi basin in size? How do the rivers compare in length? In volume of water? Which basin has the greatest rainfall? Why? How does the climate of the Amazon basin compare with that of the Mississippi? Which basin has the more luxuriant vegetation? Why? Which has more people? More cities?

Compare the Pacific slopes of the Americas in width, and in number and length of rivers.

Compare the two Americas with regard to the size and number of lakes.

Forests. — Where are the forest regions of North America? Of South America? What is made from the sap of the North American pine? Of the maple? What is made from the sap of a South American tree? What use is made of the bark of the North American oak and hemlock? Of the South American cinchona tree? Where does the coffee tree grow? To what country is most of the coffee shipped?

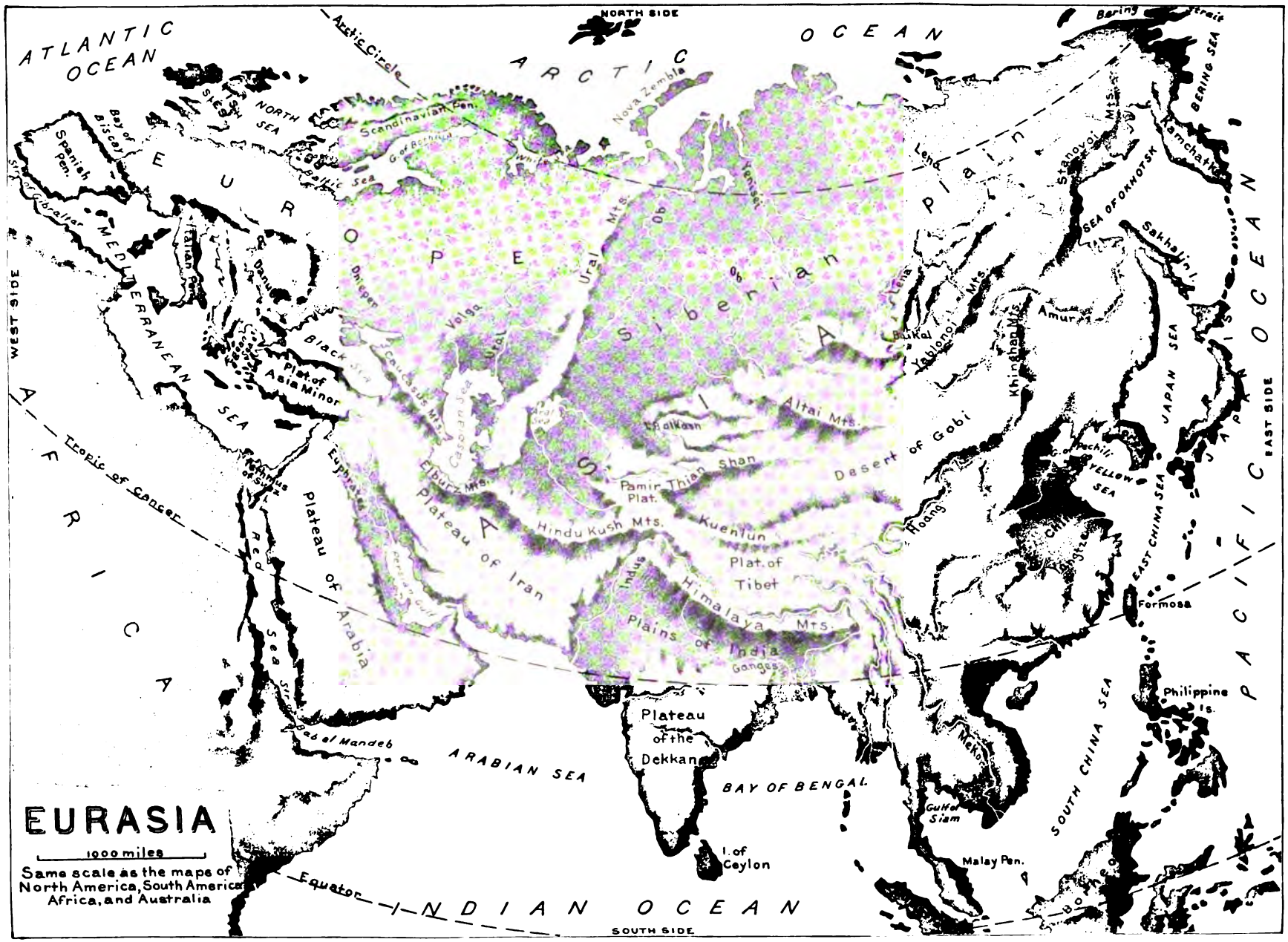
Meat. — Where are the grazing regions of the Western Continent? In which grand division are they on a plateau? In a valley? What are the meat-exporting cities of North America? Of South America? Where is much American meat sent? How?

Grain. — Where are the grain-growing regions of this continent? What grain is chiefly grown? Where is much American grain sent?

Minerals. — What minerals are found in both Americas? Where? What minerals are more abundant in North than in South America? Where is saltpeter produced? For what is it used?

People. — In which of the Americas were the Indians found to be more civilized? What two languages are mostly spoken in North America? In South America? What form of government prevails in the Americas? What exception in North America? In South America? What regions of the Western Continent are sparsely inhabited because they are too dry? Too cold? Too warm?

Railroads. — Where is Valparaiso? How is it connected with Buenos Aires? Where else is South America crossed by a railroad? Give some reasons why the Amazon basin has so few railways.


EURASIA
1000 miles
Same scale as the maps of North America, South America, Africa, and Australia
ATLANTIC OCEAN
ARCTIC OCEAN
PACIFIC OCEAN
INDIAN OCEAN
NORTH SIDE
SOUTH SIDE
WEST SIDE
EAST SIDE
Arctic Circle
Tropic of Cancer
Equator
EUROPE
ASIA
AFRICA
Scandinavian Pen.
Spanish Pen.
Italian Pen.
Plat. of Asia Minor
Plateau of Iran
Plateau of Arabia
Plateau of the Dekkan
Siberian Plain
Ural Mts.
Caucasus Mts.
Elburz Mts.
Pamir Plat.
Thian shan
Altai Mts.
Hindu Kush Mts.
Kuenlun
Plat. of Tibet
Himalaya Mts.
Plains of India
Desert of Gobi
Khingan Mts.
Stanovoi Mts.
Kamchatka
Sakhalin I.
Japan
Formosa
Philippine Is.
Malay Pen.
I. of Ceylon
Nova Zembla
Bering Strait
BERING SEA
SEA OF OKHOTSK
JAPAN SEA
EAST CHINA SEA
SOUTH CHINA SEA
YELLOW SEA
ARABIAN SEA
BAY OF BENGAL
Black Sea
Caspian Sea
Aral Sea
Persian Gulf
Red Sea
Gulf of Siam
Bay of Biscay
Strait of Gibraltar
Bab el Mandeb
Dnieper
Volga
Ural
Ob
Yenisei
Lena
Amur
Euphrates
Tigris
Indus
Ganges
Hoang
Yangtze
Mekong
Irrawaddy
Salween
Meinam
Baikal
Yablonoi Mts.
Scandinavian Pen.
Gulf of Bothnia
White Sea
Baltic Sea
North Sea
MEDITERRANEAN SEA

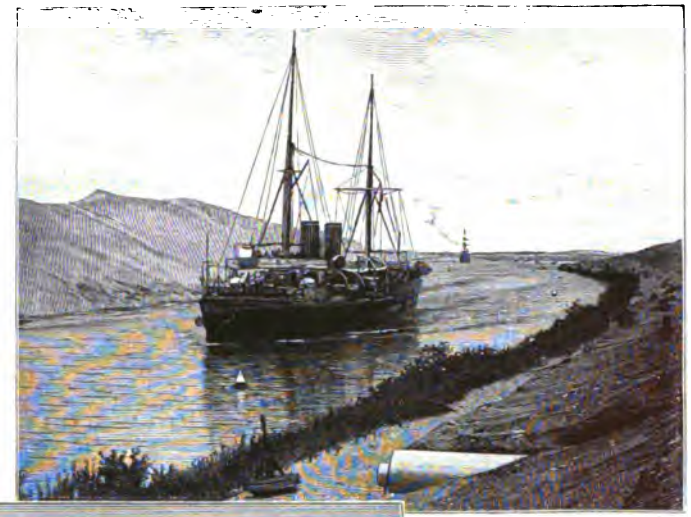
EURASIA.

49. Position, Size, and Shape.

What circle crosses the northern part of Eurasia? The southern part? What circle crosses the islands near the southeastern portion? In what zones is Eurasia? What other grand division lies in three zones? If you will trace, on tissue paper, the maps on pp. 22 and 72, and then cut them out and lay them over this map of Eurasia, you will get some idea of the size of this large grand division.

What ocean is north of Eurasia? East? South? What waters nearly surround the western part? What grand division is southwest of Eurasia? What two seas lie between Eurasia and Africa? What isthmus? A ship canal called the Suez Canal has been dug through this low and sandy isthmus. What is its use? What projected canal does this remind you of? Why was the Suez Canal easier to construct? What strait connects the Mediterranean Sea with the Atlantic Ocean? The Red Sea with the Indian Ocean? What grand division east of Eurasia? What strait separates Eurasia from North America? On which side of Eurasia are there the most islands?

What is the general shape of Eurasia? The western point of the triangle is really a long, irregularly shaped peninsula called Europe, projecting westward from the main body of the grand division, which is called Asia.



Suez Canal.

Scene at Port Said, at the northern end of the Suez Canal.

In the Western Continent we found a long mountain system in the western part, and less elevated highlands in the eastern part. The great highland of Eurasia extends in a broad V shape, and has a general east and west direction.

The western arm of the highland extends from northwest to southeast. In what direction does the eastern arm extend? The region where these two arms meet is the highest part of the great Eurasian highland, and contains the highest mountains in the world. Because one range is always snow-capped, it is called the *Himalayas*, which means the "abode of snow."

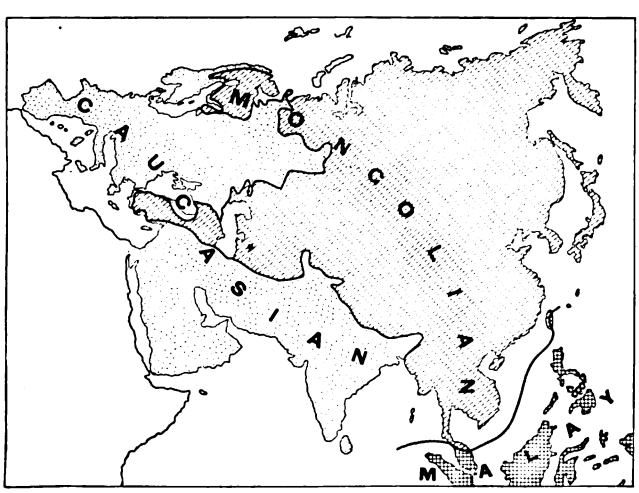
To the south and east the plateaus of the highland region extend nearly to the ocean. Describe the general surface of the land north and west of the highland. A low mountain range divides the great northern plain, and has been chosen as the boundary between Europe and Asia. What is its name?

Some of the largest rivers in the world flow east or south from the Eurasian highland.

The Himalayas, which means the "abode of snow."

Name four on the eastern slope. Three on the southern slope.

Southwest of the Ural Mountains there is a depression containing two large salt seas. They help to separate Europe from Asia. What are their names? Some of the rivers draining the great plain flow southward into these seas; but many flow north and west to the ocean. The largest of these are in the Asiatic part of the grand division, and flow into the Arctic Ocean. Why are they not useful for commerce?



Homes of the races in Eurasia.

More than three fourths of the people in the world live in Eurasia. More than one third of these live in the small European part of the grand division. Where do the Mongolians live? Where do the Malays live? These two races occupy most of the eastern part of Asia.

The home of the white race is south of the Himalayas, and about the western arm of the Eurasian highland. The Europeans are civilized white people, and are the ancestors of most of the people in America. Their occupations, habits, and needs are much like ours, and the greater part of our trade is with them.

COMPARISONS.

Position. — In what hemisphere is Eurasia? In what part of the hemisphere? What four oceans border Eurasia? In what direction from Eurasia is America? How does Eurasia compare with America in size?

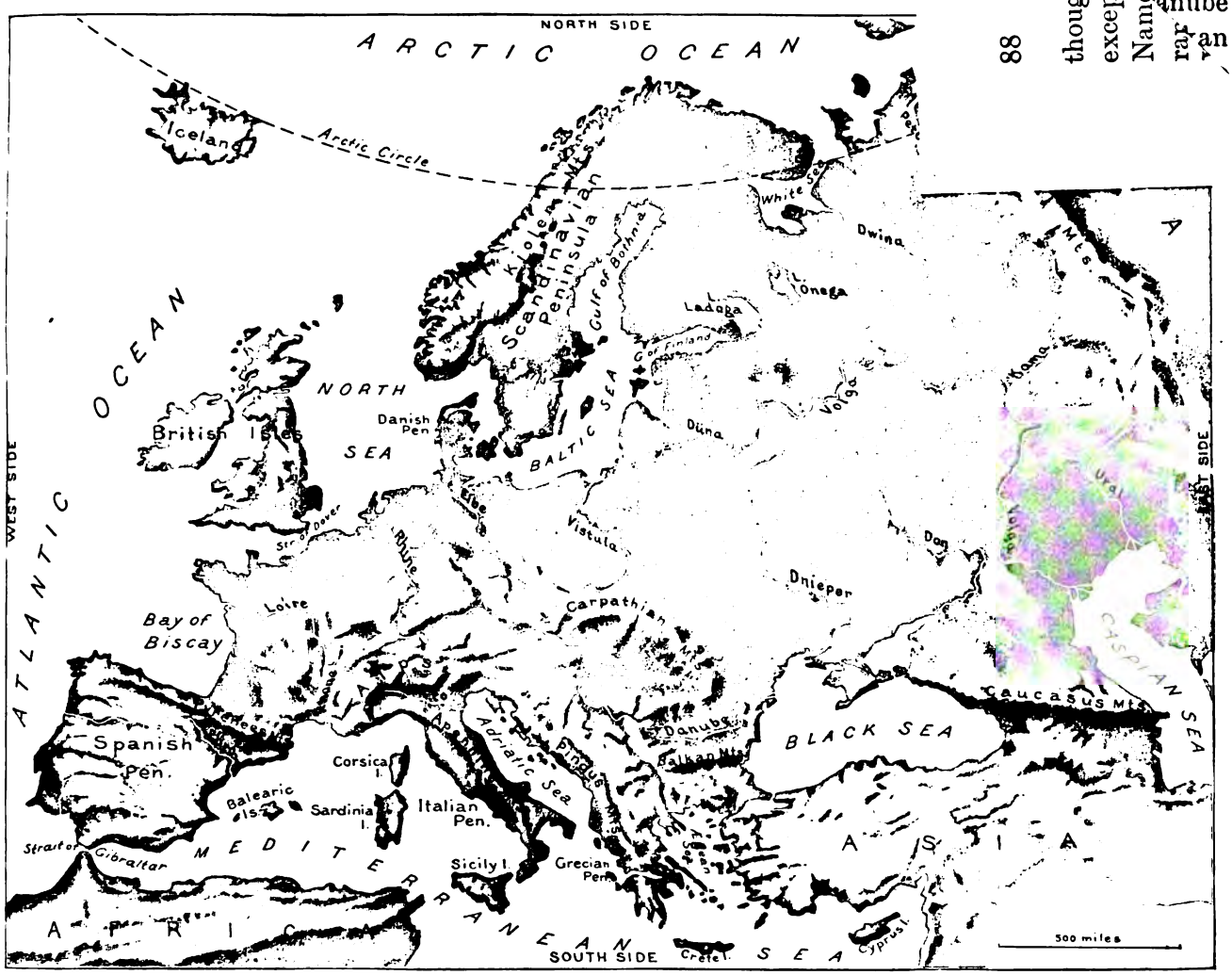
Relief. — In what direction is Eurasia longest? In what general direction does its great highland region extend? Does the great highland region of North America extend in the direction of the greatest length of the continent? How is it in South America? In what respect are the highlands of the three grand divisions alike? In what respect do the highlands of Eurasia differ from those of America?

In what direction from the highland region is the great plain of Eurasia? Compare this plain with the great plains of America in direction of greatest extent. Is the division of Eurasia into Europe and Asia natural or artificial?

Drainage. — Name the rivers of the great northern plain of Eurasia. Does all of this plain slope northward? Name the rivers of Eurasia which flow to the Pacific or the Indian Ocean.

Compare with Asia

EUROPE.



50. Position and Coast Line.

What part of Eurasia is called Europe? In what zones is Europe?

Although Europe extends much further north than the United States, its climate as a whole is warmer, for the southwest winds from the warm Atlantic penetrate far into Europe.

The northern part of Europe, however, is very cold. The valleys of the Scandinavian peninsula are filled with glaciers, and in the extreme north the plains are covered with snow during most of the year.

The sheltered valleys of southern Europe are exceptionally warm, because hot winds from Africa blow freely over them, while northern winds which might chill them are checked by the mountains. This part of Europe is the greatest fruit- and wine-producing region of the world.

We have learned that Europe is a peninsula. Its coast line is very crooked, forming many peninsulas, with gulfs, bays, or seas between. What great sea is south of Europe? What does its name mean? The people who named it

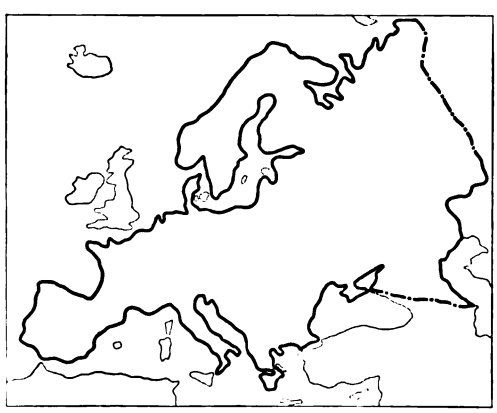
t there was no land in the world hat which lay around this sea. three seas opening into the Mediterean. What bay is west of Europe? What sea is west of northern Europe? What sea opens into the North Sea? What sea indents the northern coast of Europe?

These waters give to the grand division a great length of coast, and they extend inland so far that no part of western Europe is very distant from the sea. The people of that region have always been great sailors and traders.

Where is the Scandinavian peninsula? What smaller peninsula is south of it? The people from these peninsulas are good fishermen and seamen. How many peninsulas extend southward from Europe? What have you learned about people from the Spanish peninsula? What is the central peninsula called? The eastern peninsula?

What group of large islands is west of the North Sea? What strait separates the largest of these from the mainland? Count the large islands in the Mediterranean. What arm of this sea contains many small islands? A group of islands is often called an *archipelago*.

Practice making a sketch map of Europe like this, but larger.



POSITION AND COAST LINE OF EUROPE.

I. Location. In what zones. How bounded.
II. Coast Line. Peninsulas. Indentations. Islands.

Climbing Mont Blanc, the highest peak of the Alps.

51. Relief and Drainage.

Through what part of Europe does the great highland region of Eurasia extend? Its highest mountains in Europe are the Caucasus in the east and the Alps in the west. The summits of both these ranges are always covered with snow, and many great glaciers creep slowly down their sides.

Eastward from the Alps extend the Carpathians. What mountains are south of the Carpathians? Westward from the Alps extend the Pyrenees. The highest peaks of these mountains are always snow-covered. What peninsula is formed by the plateau south of the Pyrenees? What branch or spur extends southeast from the western end of the Alps? What peninsula does it form? What spur extends southeast from the eastern end of the Alps? What peninsula does it form? Thus we see that the three southern peninsulas of Europe are really plateaus or spurs from the Eurasian highland.

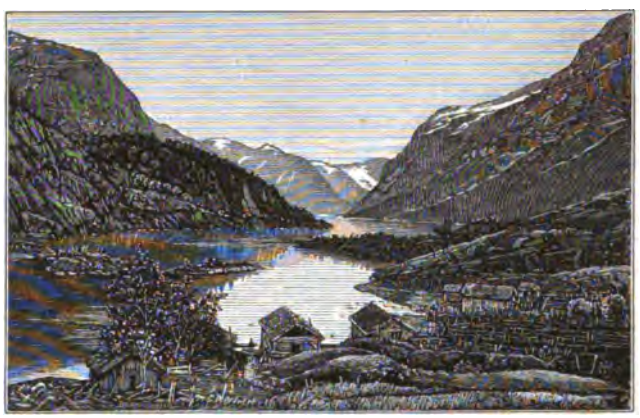
What low mountains are in the Scandinavian peninsula? They rise abruptly from deep bays, or *fiords*, on the western shore, but descend more gently on the eastern side to a plain which slopes toward the Baltic Sea.

What part of Europe is a smooth lowland

plain? What low mountains border the European plain on the east? What mountains border it on the southeast?

In which part of Europe is the great plain widest? In which part is it very narrow?

Where is the continental divide of North America? In what direction does it extend? Beginning at the Ural Mountains, draw with your pencil, across the map of Europe, a light line between the sources of the rivers which flow north and west, and the sources of the rivers which flow south and east. In what direction does the great divide of Europe extend? Which part of it is high? Which part of it is quite low?



The Kiolen mountains rise abruptly from deep bays, or fiords.

Which river of Europe flows into the Arctic Ocean? Which into the White Sea? Much of the land drained by these rivers is frozen to a great depth, thawing on the surface only, during the short summer. Name two large lakes in northern Europe. Name one river flowing into the Baltic. Which river has its source in the Alps and flows into the North Sea? Name a river flowing into the Bay of Biscay.

The largest river of Europe flows southward from the great divide, and empties through a large delta into the Caspian Sea. What is its name? Though a much smaller river than the Mississippi, it is a very important route of commerce. The great plain near its source is so low and flat that its head waters have been connected by canals with streams flowing to the northwest; thus goods from the Volga basin are shipped up the river to the Gulf of Finland and the Baltic ports. What other river flows into the Caspian Sea? As this great sea or lake has no outlet, its waters are salt.

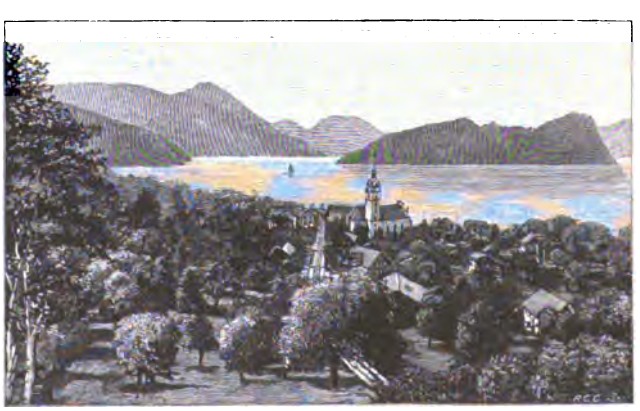
What three rivers flow into the Black Sea? Which of them cuts through the mountains at two points? The gorge where the Danube rushes between the Carpathian and the Balkan mountains is called the Iron Gate. What two rivers flow into the Mediterranean from the Alps? What river of the Spanish peninsula flows eastward?

Besides lakes Ladoga and Onega there are many smaller lakes in northern Europe. This is a great region for hunting and fishing. The lakes are frozen over for many weeks in winter, and the country near them is flat and dreary. In the Alpine region, also, there are many small but beautiful lakes.

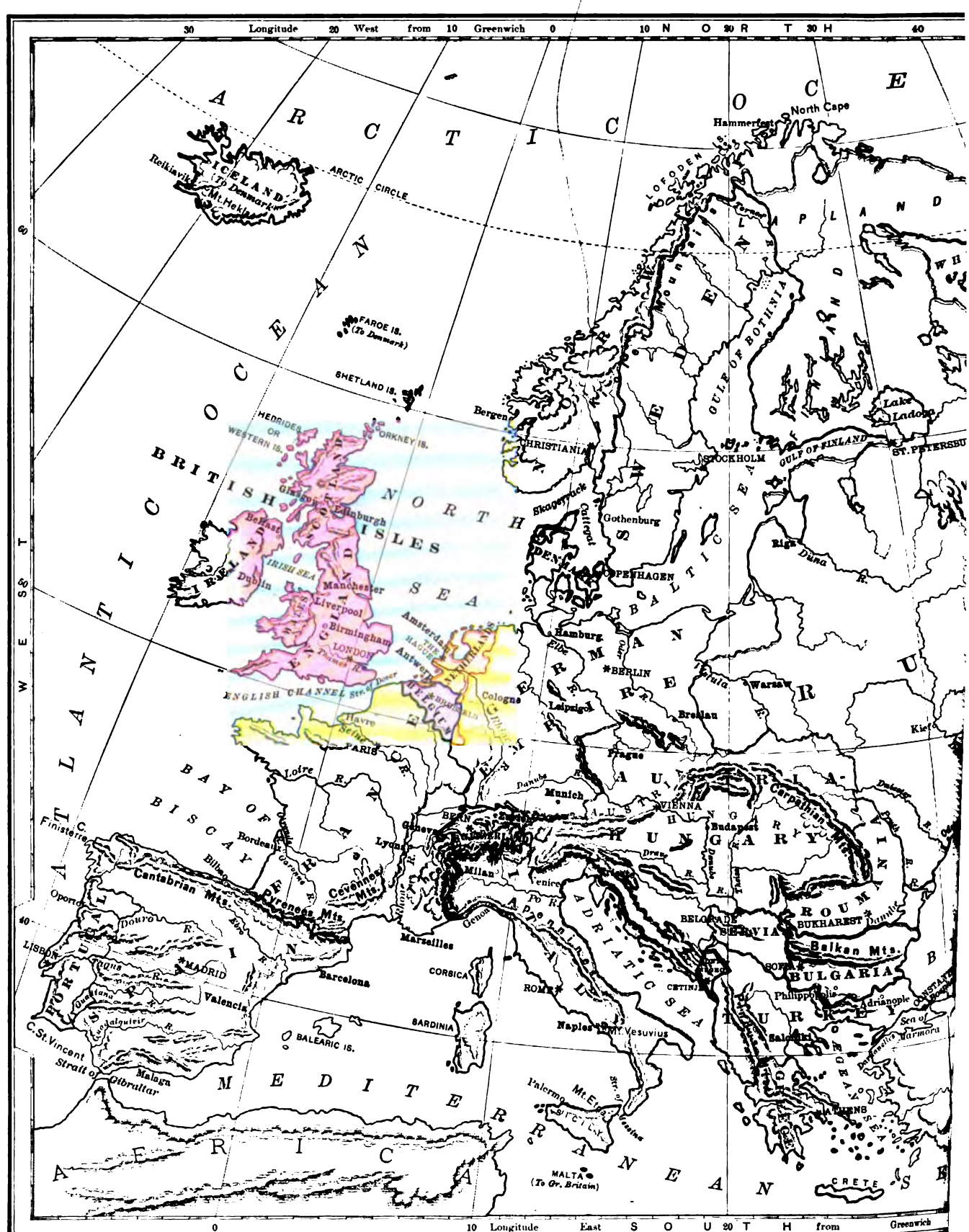
Make a sketch map of Europe, showing its large rivers.

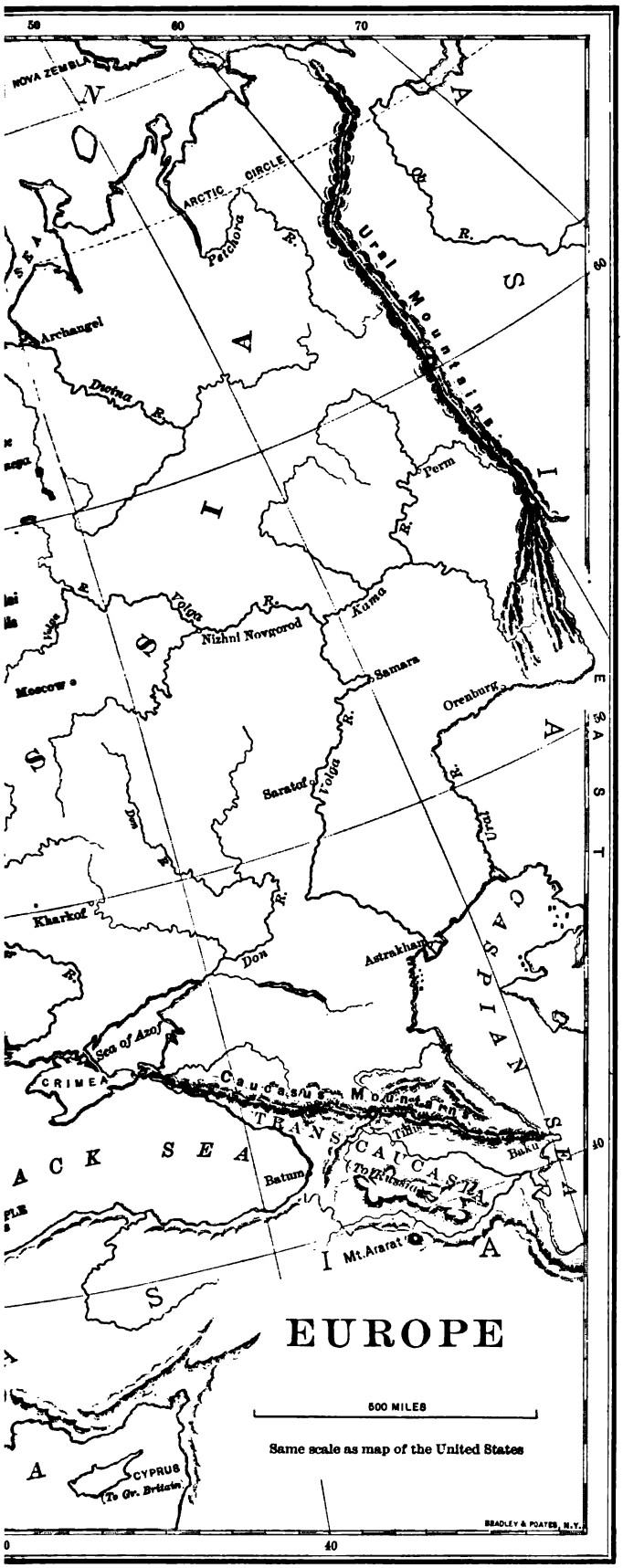
RELIEF AND DRAINAGE OF EUROPE.

I. Highlands. Position; direction; extent. Parts: Alps, Italian and Grecian peninsulas; Pyrenees and Spanish peninsula; Carpathian; Balkan; Caucasus; Ural; Kiolen.
II. Lowlands. Location. Extent.
III. Great Divide of Europe. Location. Direction.
IV. Rivers of the Northwestern Slope.
V. Rivers of the Southeastern Slope. Caspian basin. Black Sea basin. Mediterranean basin.
VI. Lakes. Northern. Alpine.



Lake Lucerne, in the Alpine region.


30 Longitude 20 West from 10 Greenwich 0 10 NORTH 20 30 40
60
50
40
ARCTIC OCEAN
ATLANTIC OCEAN
ARCTIC CIRCLE
ICELAND
To Denmark
Reikiavik
Mt. Hekla
FAROE IS.
(To Denmark)
SHETLAND IS.
ORKNEY IS.
HEBRIDES OR WESTERN IS.
BRITISH ISLES
NORTH SEA
Glasgow
Edinburgh
Belfast
IRISH SEA
Dublin
Manchester
Liverpool
Birmingham
LONDON
Thames R.
Amsterdam
THE HAGUE
Antwerp
ENGLISH CHANNEL
Str. of Dover
Cologne
Havre
Seine R.
PARIS
Loire R.
BAY OF BISCAY
Bordeaux
Garonne R.
Finisterre
C.
Cantabrian Mts.
Oporto
Douro R.
LISBON
Tagus R.
PORTUGAL
Pyrenees Mts.
Cevennes Mts.
Lyons
Milan
Genoa
Marseilles
MADRID
Guadiana R.
Guadalquivir R.
Barcelona
Valencia
CORSICA
SARDINIA
BALEARIC IS.
C. St. Vincent
Strait of Gibraltar
Malaga
MEDITERRANEAN SEA
ALGERIA
Bergen
CHRISTIANIA
Skagerrack
Cattegat
Gothenburg
DENMARK
COPENHAGEN
BALTIC SEA
Hamburg
Elbe R.
*BERLIN
Oder R.
Leipsig
Breslau
Vistula R.
Warsaw
Prague
Munich
VIENNA
AUSTRIA-HUNGARY
Danube R.
Budapest
Carpathian Mts.
Drave R.
Theiss R.
Venice
ADRIATIC SEA
Apennines
ROME
Naples
Mt. Vesuvius
BELGRADE
SERVIA
BUKHAREST
Danube R.
Balkan Mts.
SOFIA
BULGARIA
CETINJE
Philippopolis
Adrianople
TURKEY
Salonica
Sea of Marmora
Dardanelles
CONSTANTINOPLE
Black Sea
ATHENS
CRETE
MALTA
(To Gr. Britain)
Mt. Etna
Str. of Messina
SICILY
Inferno
Hammerfest
North Cape
LAPLAND
Mountains
GULF OF BOTHNIA
Lake Ladoga
GULF OF FINLAND
ST. PETERSBURG
STOCKHOLM
Riga
Duna R.
Kiev
0 10 Longitude East SOUTH 20 from Greenwich



52. People.

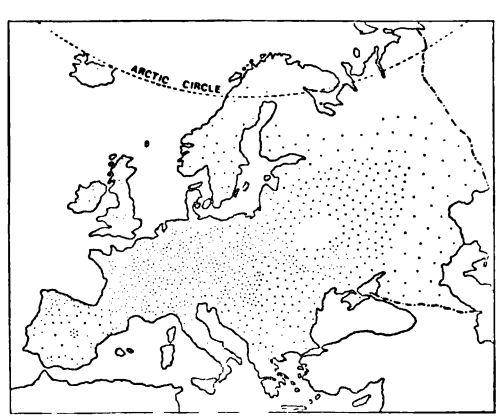
Trace, from the map on pp. 37, 38, the outline of the United States, and lay it over this large map of Europe. You see that the United States is nearly as large as the whole of Europe.

Europe is one of the smallest of the grand divisions, but it is so thickly settled that no grand division except Asia contains more people. You may think that some parts of the United States are densely peopled, but parts of Europe are much more crowded, for Europe has five times as many inhabitants as the United States.

What part of Europe is most thickly settled? (See map below.) What parts have the fewest inhabitants? Even in the less thickly settled parts there are more people than in the whole of North America. The most highly civilized people in Europe live in the thickly settled parts. They have electric lights, railways, and telegraph lines as we have, and they can receive news from all parts of the world by means of telegraph cables which have been laid on the bottom of the ocean from Europe to each of the other grand divisions.

White men first came to live in America about the year 1500. How long ago was that? That seems a long time ago. Yet the ancestors of some of the white people of Europe lived in that grand division not only hundreds, but thousands, of years ago.

The white people who settled our country were civilized when they came from Europe and conquered the savage inhabitants whom



The dots show where the most people live.

they found here. Thousands of years ago the white people of Europe were themselves savages.

The first portion of Europe to become civilized was the Grecian peninsula. The Greeks were conquered by the Romans of the Italian peninsula, who learned much from the conquered Greeks, and became the most civilized people of Europe. They made fine roads, wrote many books, raised big armies, and conquered all western Europe. Where is France? Spain? England? The Romans conquered these countries and made good laws for the people.

Where is the German Empire? The savage tribes who lived in that region finally conquered the Romans, and learned civilization from them.

Where is Denmark? Norway and Sweden? The savages of that region were called Northmen. Why? They were bold seamen who sailed about the northern seas, murdering and robbing the people in the more civilized lands. But they gradually learned peaceful ways from the people whom they robbed.

Where is Russia? This was one of the last countries of Europe to become civilized. Most of the people are white, but there are also many of the yellow race.

Where is Turkey? The Turks belong to the yellow race. Turkey is hardly counted among the civilized nations of Europe even to-day.

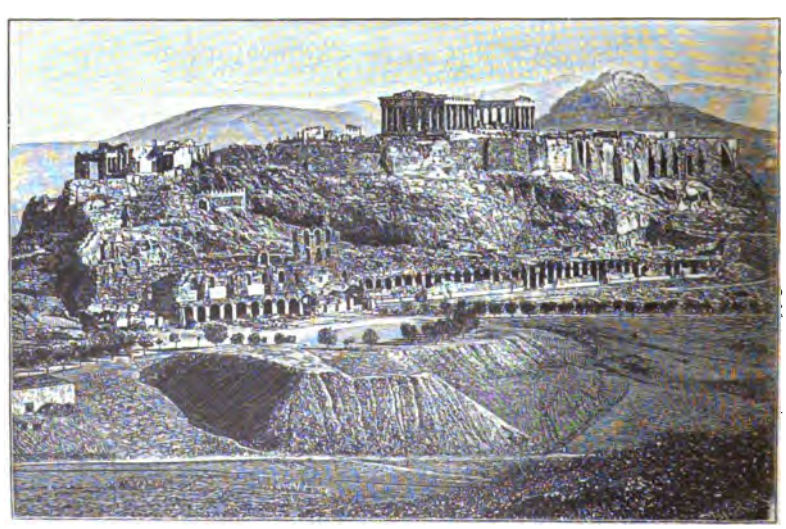
A person who can talk in English and in Spanish can make himself understood in nearly all parts of America. In Europe the people of almost every country speak a language of their own, which the people of the neighboring countries do not understand. Thus, the English language is spoken in the British Isles; the German language in the German Empire; the French in France; the Spanish in Spain; the Norwegian in Norway; and so on. So that a person who wished to talk with the people in all parts of Europe would have to learn to speak many languages.

Though the languages of the various countries of Europe differ so greatly, some of them are more nearly alike than others.

Draw a line from the eastern part of Belgium to Greece. The countries southwest of this line were conquered by the Romans, and their languages are not only somewhat alike, but are somewhat like the old Latin language that was spoken by the Romans. For this reason the southwestern part of Europe is often called Latin Europe.

Draw another line from Greece to the northern part of Sweden. The languages of the countries between this line and southwestern Europe are more nearly like the old German language than the old Latin language, and so this middle part of Europe is often called Germanic Europe. England was conquered by German peoples, and afterwards by people from France, but the English language is more nearly like the German than like the French or Latin, so the British Isles are considered with Germanic Europe.

What great country is in eastern Europe? Find Bulgaria; Servia. The languages of these



Ruins of ancient Athens, in the Grecian peninsula.

London Bridge.

three countries are called Slavonic languages; they resemble one another, but are very different from the other languages of Europe.

Thus we see that Europe may be divided by the languages of the people into three great parts: 1. Middle or Germanic Europe; 2. Southwestern or Latin Europe; and 3. Eastern or Slavonic Europe. The people in each of these parts are somewhat alike not only in their language, but also in their manners and customs, in their religion, and often even in their general appearance. Thus, while most of the people of Europe are Christians, the Christians of Southwestern Europe are mostly Roman Catholics, those of Middle Europe are largely Protestants, and those of Eastern Europe, except the Turks, belong mostly to what is called the Greek Church.

Make a sketch map of Europe. Show where it is most thickly settled, and mark off and name its three divisions.

PEOPLE OF EUROPE.

I. DENSITY OF POPULATION. Most dense part. Least dense. Comparison with the United States.
II. SPREAD OF CIVILIZATION. Greeks and Romans. People north of the Alps. Russians and Turks.
III. LANGUAGES. Europe and America. Three divisions of Europe.

53. British Isles.

Where are the British Isles? The largest island is called Great Britain. What is the name of the other large island? What strait and channel separate these islands from France? On clear days the white chalk cliffs of Great Britain may be seen across this strait from the shores of France.

It takes the fastest steamship about six days to go from New York to Liverpool in the British Isles, and it takes about four hours to go on a fast railway train from Liverpool to London. London is the capital of these islands, and the largest city in the world. It contains many more people than the city of New York with the neighboring cities.

The building in London where British lawmakers meet.

English farmhouse.

The country between Liverpool and London is wonderfully green and beautiful, for the air of the British Isles is very soft and moist.

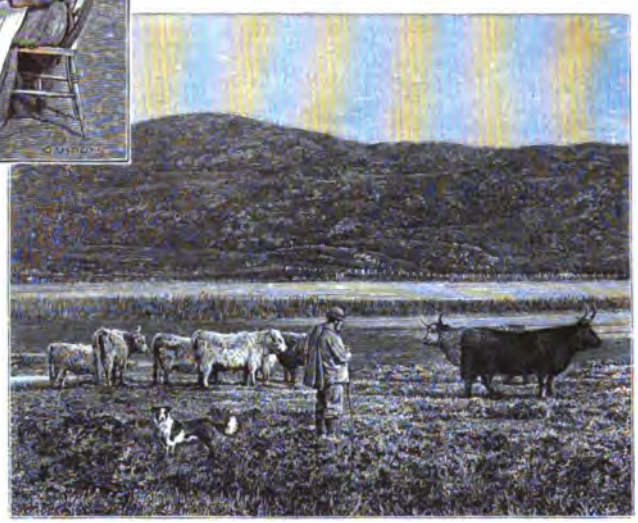
Fogs are common in London, and these, with the coal smoke of the great city, begrime the buildings and sometimes make the streets so dark that gaslights are necessary in the daytime. The streets are crowded with carts and omnibuses. There are few street car lines, but underground railways convey people about the city. The river Thames flows through the city and forms a harbor for ships from all parts of the world. London Bridge is one of the many bridges which cross the river.

What three divisions has the island of Great Britain? Each was once a separate nation. Ireland also was an independent state. Now

Irish peasant spinning flax.

they form the United Kingdom of Great Britain and Ireland.

Canada, the Australian Continent, a large part of Asia, and about one third of Africa belong to this small but rich and powerful kingdom. The United Kingdom and all the colonies are together called the British Empire.



In the Scotch Highlands many sheep and cattle graze.

In the United Kingdom, as in our country, the people choose the men who make the laws; and their king or queen, like our president, appoints men to see that these laws are obeyed. But their ruler is not chosen as our president is. He holds his place as long as he lives, and when he dies one of his children or other near relatives becomes the ruler. A government in which the ruler holds the position because of his birth is called a *monarchy*. What is the difference between a monarchy and a republic?

Many years ago the English people learned to make the best cloth then made, which they sold all over Europe for less than other weavers charged. Then they began to make other things, and made them so well that people were willing to buy them. After a while coal and iron were found in England, and factories were built for making iron and steel goods.

In northern and western England the factories are so close together that the region seems a never-ending city of factories, furnaces, and mills, in which is made almost everything that can be made of iron or steel, cotton or wool. Many thousand steamships and sailing vessels carry the manufactured goods to other parts of the world, and bring back raw material and food. London and Liverpool are the principal seaports and commercial cities. What is the chief raw material which England takes from our country? What food materials does she get from our country?

Where is Manchester? It is the greatest cotton-manufacturing city in the world. A big canal has been made from Manchester to the sea, so that ships can reach the city. Where is Birmingham? Iron and steel goods are made there.

The mountain scenery of the Highlands, as northern Scotland is called, is very fine. There are many beautiful lakes nestling among hills whose gray stone sides are partly covered with moss and grass and purple heather. Here many sheep and cattle graze, watched by faithful shepherd dogs. Edinburgh is the capital of Scotland. Where is Glasgow? This city is famous for the steel steamships made on the river Clyde, which flows through it.

Ireland is called the Emerald Isle because of the rich verdure produced by its moist climate. The island serves as the market garden for its manufacturing neighbor, and, besides vegetables, sends to England butter and eggs. The Irish weave fine linen cloth from the bark of the flax plant. Dublin and Belfast are the largest cities in Ireland.

There are so many people in England, and they are so largely employed in manufacture, that the British Isles do not produce food enough for them. England, therefore, is a great trader among the nations. She owns more vessels than any other country. What does she buy for her people? For her factories? What does she sell?

Many English and Scotch, and a great many Irish people, have come to the United States to live.

Sketch Europe, showing the British Isles.

BRITISH ISLES.

I. LOCATION.
II. DIVISIONS. Of the larger island. The smaller island.
III. SURFACE AND CLIMATE.
IV. MANUFACTURES. Growth. Cities.
V. PEOPLE AND GOVERNMENT.
VI. TRADE. Imports. Exports.
VII. LONDON.

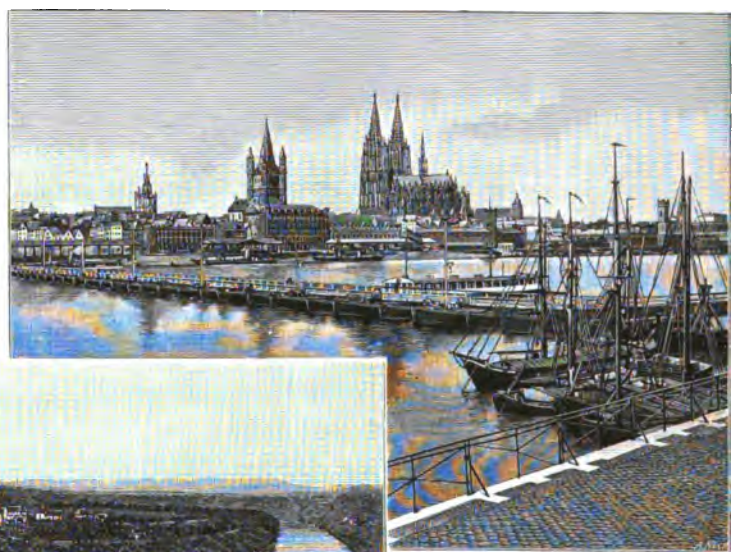
54. The German Empire and the Netherlands.

Find the German Empire on the map. What waters on the north? What countries east? South? West? In what direction does most of its surface slope? What river of the German Empire flows to the Black Sea? Into what seas do all the other streams flow? What is the name of the river in the western part? The river Rhine is famed for the beauty of the vine-clad, castle-crowned hills by which it is bordered.

The Falls of the Rhine, on the border of Switzerland.

The broad plain sloping northward to the Baltic and North seas is the home of the Germans. When first known they were savage, warlike tribes. They are still the finest soldiers in Europe, but they are just as much noted for their learning. Their schools and universities, their art galleries and their libraries, are among the best in the world. Many Americans go to Germany to study music, for much of the best music has been composed by Germans.

The country used to be divided into a number of small monarchies, but in the year 1871 these were united to form one strong nation. Each little country takes care of its own affairs, as our states do, but the King of Prussia, the largest of the states, is the head of the united German nation. The people choose the lawmakers. Such a combination of countries in one great monarchy may be called an *empire*, and the ruler, an *emperor*. What other empire do you know of?



Cologne, on the lower Rhine.

The Germans are a busy and thrifty people. Every bit of land that can be made to yield crops is carefully planted, and even the steep hillsides along the rivers are dug away so as to form steps or terraces, which are set out with trees and vines. Women and girls do much of the outdoor work, for the boys must go to school, and every able young man must be a soldier for one year or more.

Grapes and potatoes are grown in the hilly lands; rye for bread, and beets for sugar in the

level lands. About a hundred years ago, a German chemist discovered that sugar could be made from the beets of the temperate zone as profitably as from the sugar cane of the torrid zone, and now nearly all the sugar used in Europe is beet sugar. Beets are grown for this purpose in all the countries of the European plain, but particularly in Germany. The sliced beet is put into hot water to extract the juice, which is then boiled down and purified as cane sap is, to separate the sugar from the sirup. The portion of the beet which is left makes good food for cattle.

Germany manufactures many things besides beet sugar. She ranks next to Great Britain among European nations in the quantity of coal mined and in the amount of iron and steel made. Woolen, cotton, and linen cloth are also manufactured. In some of the villages of Germany nearly every house is a little factory, in which the people weave cloth, or carpets, or the beautiful lace for which the Germans are famous.

Find Berlin on the map. After London and Paris it is the largest city in Europe. It is the capital of the empire. Where is Hamburg? It is one of the greatest seaports on the mainland of Europe. On what river is Cologne? It is the center of a great manufacturing region and is famous for the *cologne water* made there.

Many German immigrants come to our country every year.

A Dutch milkmaid.

What countries border the Netherlands? On the coast of what sea is it? What river flows across the country? Almost the whole of the Netherlands lies in the great delta of this river. What, then, would you expect the surface and soil of the country to be?

Netherlands means "lowlands." This state is also called Holland.

Many years ago the sea covered a large part of the country, but the people built *dikes*, or walls of earth, into it so as to shut in a shallow part. When the dike was finished the water was pumped out of the basin inclosed, and in a short time the land thus gained from the sea was ready to be plowed and sown with grain. Many such dikes have been built, so that now much of the surface of the Netherlands, in the west and southwest, is below sea level. Any water which collects on this land is pumped out by windmills. Above the flat, green country the great sails of these windmills flutter like the wings of gigantic birds.

Water which collects on this land is pumped out by windmills.

Canals cross almost every part of the country. Some of the larger canals are for boats and barges; some are to drain the land, and others take the place of fences. In winter, when these canals are frozen, men, women,

In Amsterdam many of the streets contain canals.

and children go about on skates, and almost all the trade is carried on over the ice.

The people of the Netherlands are called Dutch, and are nearly related to the Germans. They are noted for their industry, and there are no better farmers in all Europe. They raise grain and potatoes, but the Dutch are best known for their butter and cheese, for the moist lowlands make excellent pasturage. Not enough grain is produced to feed the dense population, but dairy products and cattle are exported.

Some of the large islands southeast of Asia, some of the West Indies, and a part of Guiana in South America belong to the Dutch. Drugs, coffee, and spices are sent from these colonies to the mother country, and from there to all parts of Europe and America.

Find Amsterdam. It is surrounded by strong dikes. Many of the streets contain canals, so that you may look out of your hotel window and see a white sail in the street before your door. Many of the diamonds from the mines in Africa are sent to this city to be cut and polished. It is the largest city of the Netherlands, and one of the busiest seaports in Europe. It is sometimes called the capital of the Netherlands, but the queen resides, and the laws are made, at the Hague.

New York city was first settled by the Dutch.

Make a sketch map of Europe, showing the German Empire and the Netherlands.

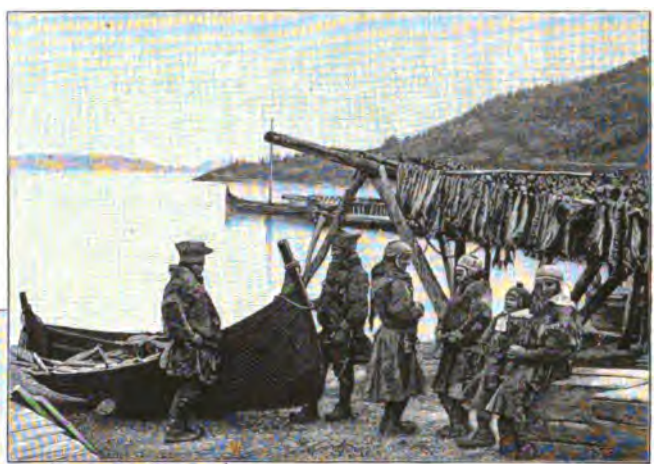
THE GERMAN EMPIRE AND THE NETHERLANDS

I. Location and Boundaries. Of the German Empire. Of the Netherlands.
II. Surface and Drainage.
III. Dikes and Canals. Their uses.
IV. Occupations and Productions.
V. People and Government.
VI. Cities. Berlin. Hamburg. Amsterdam.

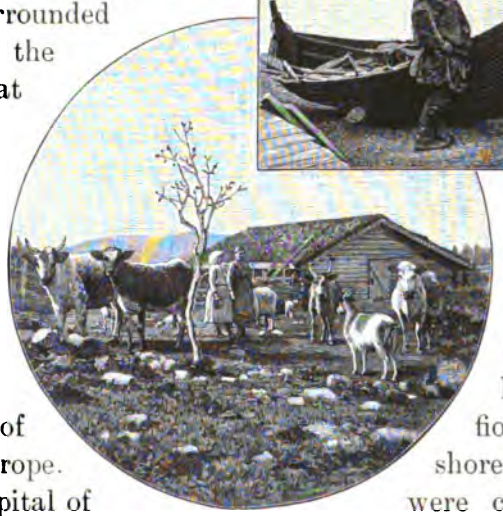
55. The Norse Countries.

In what part of Europe is the Scandinavian peninsula? What two countries does it contain? What country occupies a peninsula and some islands south of Sweden? What straits separate Denmark from Norway and Sweden? Between what seas is Denmark? What waters nearly surround Norway and Sweden? Which of these two countries borders the Atlantic?

Norway, Sweden, and Denmark are sometimes called the Norse countries, or countries of the Northmen. These bold sailors overran



Drying fish in Norway.

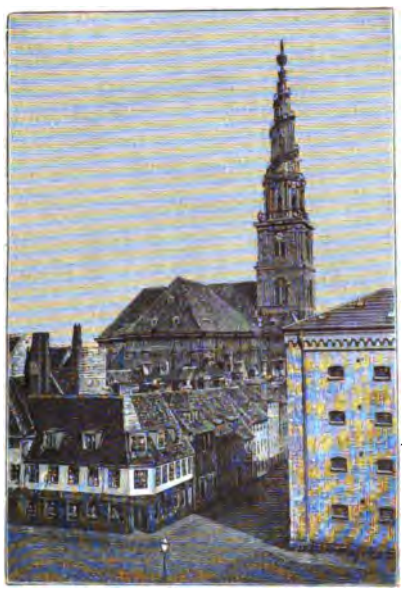


A farmyard in Sweden.

England, discovered Iceland and Greenland, and even visited America long before the time of Columbus. Many lived beside the deep bays, or fiords, that indent the rocky shores of Norway. These bays were called *viks*, and so the bold Northmen were known as Vikings.

Sweden and Norway are separate countries, but they have the same king. The languages and the customs of the two peoples are very much alike.

Cattle, sheep, and grain are the chief farm products, but in Norway, where much of the surface is too rough for farming, the fisheries and the forests give employment to many people. The cod and herring fisheries of Norway are among the most important in the world. Spring is the season of cod fishing, when millions are caught, dried, and sent to different



Street in Copenhagen, Denmark.

European countries. Herring come to the coast twice a year, summer and winter. The Norway pine is one of the very best kinds of timber. Some of it is used at home for ship-building, and much of it is exported to different parts of Europe.

What are the capitals of Sweden and Norway?

Every summer travelers go to the northern part of Norway to see the beauties of the bold rocky coast, with the glacier-filled valleys, and to watch the midnight sun. In what zone is the northern part of Norway? What is meant by the "midnight sun"? (See p. 18.)

The surface of Denmark is low and sandy. The sand in the west is blown up by the wind into hills, or *dunes*, along the seashore. These are generally planted with grass, so that the roots shall keep the sand from blowing inland and covering the farms.

Grain is grown and cattle are raised on the islands; cattle, horses, and sheep are raised on the mainland. The Danes control the fisheries of Iceland and Greenland.

Find Copenhagen. It is the capital of the Kingdom of Denmark, as well as the largest city. It is noted for its libraries, museums, and art galleries.

Though not nearly so many people come to our country from these northern peninsulas of Europe as from the German Empire and Ireland, the number of such immigrants is increasing. Many of them settle in the most northern part of our country, and become industrious farmers and useful citizens.

Make a sketch map of Europe, showing the Norse countries.

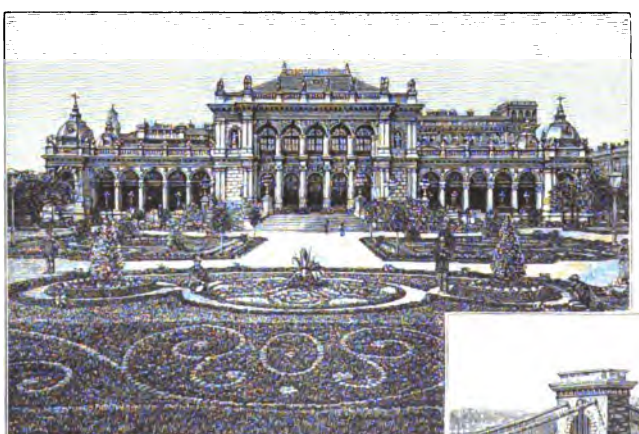
THE NORSE COUNTRIES.

I. Location and Boundaries. Of Norway. Of Sweden. Of Denmark.
II. Surface and Coast Line. Norway. Sweden. Denmark.
III. Occupations. Fishing. Lumbering. Farming.
IV. History and Government.
V. Cities.

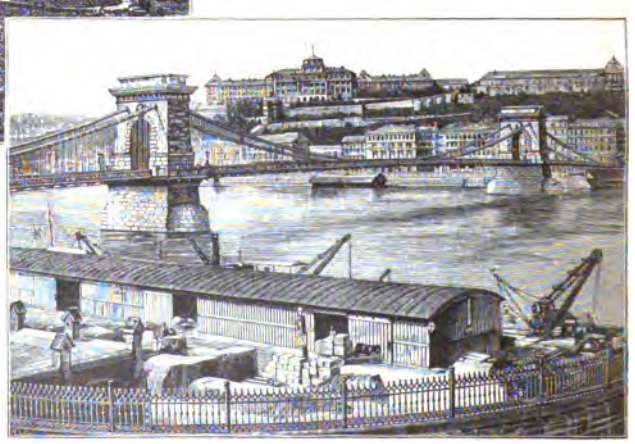
56. Austria-Hungary and Switzerland.

What countries surround Austria-Hungary? Has it any seacoast? What part of it lies in the Alpine region? This part is called the Tyrol. What mountains in the eastern part? Most of its surface is occupied by the basin of one great river; what is its name?

Southeast of the German Empire is another great empire containing many German-speaking people.

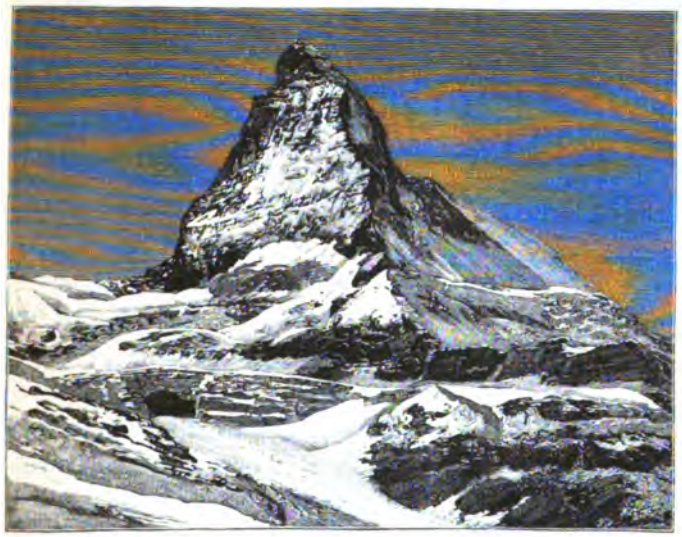


Music hall and city park in Vienna.



Bridge over the Danube at Budapest.

This empire is formed of two countries, Austria and Hungary. *Austria* means "eastern kingdom." Part of the German Empire was once called the "western kingdom." Hungary was named after a people of the yellow race, called Huns, who came from Asia many years ago, and whose descendants still live in Hungary. They long ago adopted the habits and manners of other Europeans, but still look and speak somewhat like the race to which they belong.



An Alpine peak — The Matterhorn.

The great treeless plains of Hungary, drained by the Danube, are noted for the quantity and excellence of their wheat and corn.

There are many factories of linen cloth in Austria-Hungary, and the Bohemian glass made there is famous. The people of the Tyrol are hardy mountaineers. They are herdsmen and noted wood carvers.

What is the name of the capital of Austria-Hungary? This is one of the largest and most beautiful cities of Europe. The palace of the emperor in Vienna contains one of the largest libraries in Europe. The people are noted for their love of music and gayety.

Swiss cottages on the steep Alpine slopes.

Budapest, on both sides of the Danube, is in the midst of the Hungarian wheat fields, and is a great flour-milling center.

What is the name of the little country between the Tyrol and France? What countries border Switzerland on the north and on the south? What can you say of the size and surface of Switzerland? [illegible] by the French.

Switzerland is one of [illegible] of the world go to tries of Europe. It is [illegible]inting, music, medi- Alps that about one th[illegible] Beautiful pottery always covered with sn[illegible]is city. Where is

The slopes of the Alp[illegible] the silk of France pasture, and the Swiss cl[illegible] Find Bordeaux. It world over. Where the h[illegible] of vineyards, and carts, the peasant women [illegible]xport. What is the shoes may be seen beari[illegible]rn France? hay on their heads down[illegible]e France was a mon- below. [illegible]ow a republic.

Many of the [illegible] tages [illegible] and barns of [illegible] as if they [illegible] steep mount[illegible] they are bu[illegible] In the [illegible] of S[illegible] music[illegible] wood[illegible] Many[illegible] expor[illegible] til a[illegible] high

A Swiss street cart.

The small Kingdom of Belgium has so many large cities that it is one of the most thickly peopled states in the world. Because of the careful cultivation of the land, Belgium has been called the "Garden of

prevented the Swiss people from trading much with the people of Italy, but now the longest railway tunnel in the world has been dug through the Alps from one country to the other.

German is spoken in the north of Switzerland, French in the west, and Italian in the south. The Swiss are as brave as they are clever, and for many years have held their little country as an independent republic.

Wheat harvest in France.

Find Geneva. It is on a beautiful lake of the same name. Zurich is the largest city of Switzerland. Bern is the capital.

rocky coast, with visit Switzerland to see its
to watch the midn mountain scenery.
the northern part c Europe, showing Austria-Hungary
by the "mid-
night sun"? (See p. 18.)

The surface of Denmark is low and sandy. The sand in the west is blown up by the wind into hills, or *dunes*, along the seashore. These are generally planted with grass, so that sand from blowing farms.

Grain is grown a islands; cattle, horsh the mainland. The of Iceland and Gree with Italy by a long tun-

RY AND SWITZERLAND.

NDARIES. Austria-Hungary. Swit-

arpathians. Danube basin.
e. Industries. Governments.
udapest. Geneva.
s. Glaciers. Lakes.

e and Belgium.

England? What separates it from
s east of France? What country
t?

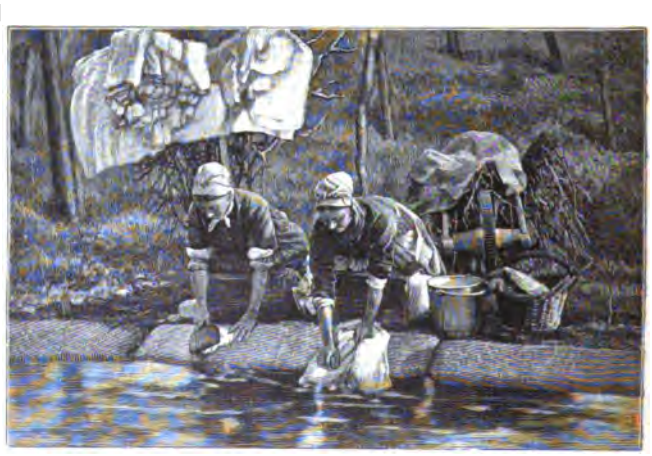
es most of the surface of what direction do most of ame them. Name one Most of these rivers are connected by canals. Is or internal trade? the coasts of France? nected by railways with

nel through the Alps. Is France well situated for foreign commerce?

Where is the island of Corsica? It is a part of France. France owns a large part of northern Africa, too, with which she trades across the Mediterranean. What country does France own in South America?

What is the name of the small country northeast of France? About half the people of Belgium are nearly related to those of northern France, and speak a similar language; the other half are more like the Dutch in speech, appearance, and manners.

Both in France and in Belgium the land is cultivated with the greatest skill, and produces abundantly. In some places the thrifty farmers have even drained the water from the lakes and marshes in order to cultivate the land it



French washerwomen.

once covered. Along some parts of the coast of Belgium dikes have been built, as in the Netherlands, and many miles of land have been gained for grain fields and pastures in this way.

In northern France and in Belgium the cli-

mate is cool and moist, and the land is level. Wheat and sugar beets are the chief crops. No country except the United States raises so much wheat as France, but the French people eat so much bread that all the wheat raised there and more is needed for their food.

The south of France is much warmer than the northern part. The surface is rough, and instead of wheat fields there are vineyards, olive orchards, and rows of mulberry trees. The vineyards yield the most important crop of the country, and much wine is made. Some of the best olive oil comes from France, where it is pressed from the fruit of the olive tree. But one of the chief employments of southern France depends upon the mulberry tree.

Silk is a fiber that the silkworm spins. It is something like the strand of a spider web. The silkworm is a kind of caterpillar. It feeds on the leaves of the mulberry tree, and so this tree is grown with great care. When the worm is full-grown it spins a cover about itself, winding the fine strand of silk round and round its body until it is wholly covered in a case called the *cocoon*.

Market place, Lyons.

The cocoons are softened in hot water, and the silk fibers are wound off upon spools. The fibers are spun into silk thread, which is woven into cloth. More silk goods are made in France than in any other country in Europe.

Where is Paris? Next to London it is the largest city in Europe. Its streets are decorated with marble arches, columns, and statues, and planted with rows of

The Arch of Triumph, Paris.

trees. On summer evenings one may see people sitting at little tables along the sidewalk, before the cafés, taking refreshment and chatting gayly. In the galleries of Paris are many pictures and statues brought from Italy and other countries once conquered by the French. Students from every part of the world go to Paris to study painting, music, medicine, and science. Beautiful pottery is made near this city. Where is Lyons? Most of the silk of France is woven there. Find Bordeaux. It is in the midst of vineyards, and wine is its chief export. What is the seaport of southern France?

For a long time France was a monarchy, but it is now a republic.

A milk cart in Brussels.

The small Kingdom of Belgium has so many large cities that it is one of the most thickly peopled states in the world. Because of the careful cultivation of the land, Belgium has been called the "Garden of

Europe;" because the neighboring nations have fought so often on its territory, it has been called the "battle ground of Europe."

What is the capital? It is noted for the carpets and the lace made there. Antwerp is a large and busy seaport.

In former times some of the best people of France came to North America to live. Many of them settled in South Carolina, and in the cities of New Orleans and Mobile, where their descendants are among our most prosperous citizens.

Make a sketch map of Europe, showing France and Belgium.

FRANCE AND BELGIUM.

I. LOCATION AND BOUNDARIES. France. Belgium.
II. SURFACE AND DRAINAGE. France. Belgium.
III. CLIMATE AND PRODUCTIONS. In the northern part. In the southern part.
IV. SILK INDUSTRY. Mulberry tree. Silkworm. Manufacture.
V. CITIES. Paris. Lyons. Bordeaux. Brussels.

Street scene in a Spanish city.

58. Spain and Portugal.

What two countries occupy the peninsula at the southwest extremity of Europe? What country and water north of Spain? What waters east and south? What group of islands east? These islands belong to Spain. What water west of Portugal?

Spanish milkman.

The Spanish peninsula is a high plateau crossed by several mountain ranges. What range between Spain and France?

The plateau is hot in summer and cold in winter, and so dry and rough that both farming and commerce are difficult. So the peninsula is the least thickly settled part of western Europe. (See small map, p. 91.) Most of the people live on the slopes near the coasts, where there is more rainfall, and in the deep river valleys of the interior, where water can be had to irrigate the farms. Which river flows southeast? Which rivers flow westward?

Spanish peasants.

These slopes and valleys are among the best of fruit-growing lands. Oranges, lemons, limes, English walnuts, and almonds are sent to the countries of northern Europe. Olives and olive oil are also exported.

Many kinds of grapes are grown, so this is a great wine-producing region. A great many of the grapes are dried into raisins on the warm ground. Cork is also produced. It is the bark of a kind of evergreen oak.

Peas, onions, and garlic are raised, and with Indian corn, which is raised in the west, form the chief food of the people. On the dry highlands large herds of merino and other kinds of sheep find pasturage.

The great wealth of Spain is in its minerals. Its copper, lead, and quicksilver mines are very rich, and much valuable iron ore is

shipped to England, chiefly from the port of Bilbao. Where is this port?

Spain and Portugal are both kingdoms. After the discovery of America, Spain was rich and powerful; she owned much of Europe and nearly all of America, and had ships on every sea. The Portuguese also were great sailors, and had rich colonies in those days. They were the first to sail to Asia around the south end of Africa, and Magellan was a Portuguese sailor. But both kingdoms have lost most of their colonies, and are now neither very rich nor very powerful.

What strait separates Spain from Africa? On the Spanish shore of this strait is a high cape called the Rock of Gibraltar. Many years ago the English drove the Spaniards away from this rock and made there the strongest fortress in the world, which Great Britain still holds. This fortress is important because it commands the narrow entrance to the Mediterranean Sea.

Madrid, the capital and largest city of Spain, is in the desolate plateau region. The nights are almost always cold, but the days are often so warm that nearly every one takes a *siesta*, or nap, in the middle of the day. Barcelona is the greatest commercial city. Where is it? Find the capital of Portugal. Where is Oporto? It is in a great wine-producing region.

Make a sketch map of Europe, showing Spain and Portugal.

SPAIN AND PORTUGAL.

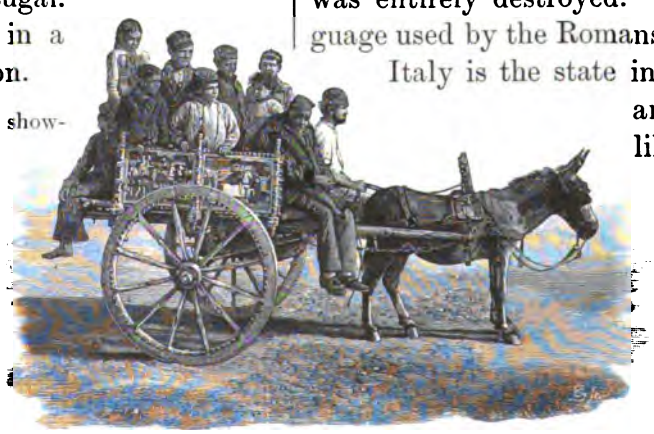
I. LOCATION AND BOUNDARIES. Spain. Portugal.
II. SURFACE AND CLIMATE.
III. PRODUCTIONS. Fruits. Cork. Minerals.
IV. PEOPLE. Distribution. History. Cities.

59. Italy.

What is the middle peninsula of southern Europe? It is occupied by the Kingdom of Italy. By what waters is it nearly surrounded? What islands west? To what country does Corsica belong? What island southwest? Sardinia and Sicily are parts of Italy. What high mountains on the northern border? What range of mountains extends the whole length of the peninsula? Where is the river Po?

Of all the countries of Europe, Italy is the most famous. More than twenty-five hundred years ago some people settled near the middle of the west coast of Italy and built a village, which grew into the great city of Rome. The city became the center of a strong nation which conquered all of Italy. As years went by, the Romans conquered all southern and western Europe, and a large part of Asia and northern Africa, and formed the great Roman Empire. Afterward parts of this empire rebelled and formed independent states, and other parts were conquered and annexed by other nations, so that the Roman Empire was entirely destroyed. Even the Latin language used by the Romans ceased to be spoken. Italy is the state in which the language and customs are most like those of the Romans. The farmers of Italy are industrious, and the merchants are good traders. Many of the educated people are skillful in painting and sculp-

An Italian market place.



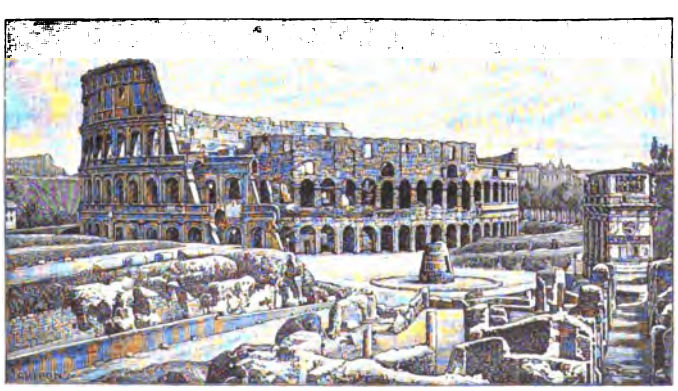
An Italian cart.

ture. All the people are fond of music, and love their bright, sunny land.

Wheat, corn, oats, and rice are the chief crops in the plains of the Po and in the level river valleys. More raw silk is produced than in any other country of Europe. Oranges, olives, wine, and chestnuts are sent to other parts of Europe and to the United States.

Find Rome. It is the residence of the King of Italy, and of the Pope, who is the head of the Catholic Church. The Pope's palace, called the Vatican, is near St. Peter's, the largest church in the world. Rome is famous for the ruins of its ancient buildings. Among these is the Coliseum, which was used by the ancient Romans as a sort of circus. It could hold as many people as would make a good-sized city.

Where is Naples? It is the largest city of Italy. Much macaroni is exported from this city. Near by are the ruins of Pompeii, a city buried nearly two thousand years ago by ashes falling from the neighboring volcano, Vesuvius. After hundreds of years the ruins were accidentally found, and much of the old city has been uncovered.

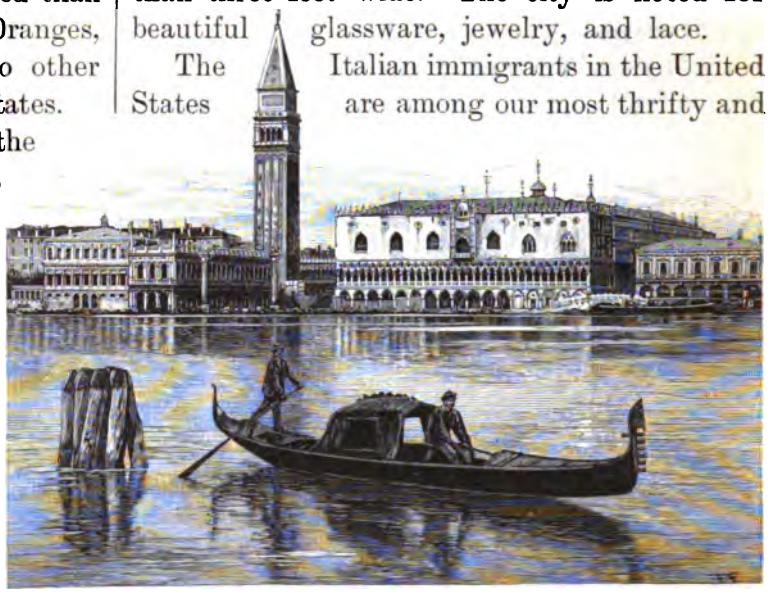


Ruins of the Coliseum, Rome.

Find Milan. It is the chief market in the plain of the Po.

Where is Venice? In the days of Columbus it was the greatest commercial city in Europe. It is built on some low islands several miles from the shore. Canals take the place of the main streets, and the people go about in boats instead of in wagons or street cars. The paved streets are very narrow, some of them not more than three feet wide. The city is noted for beautiful glassware, jewelry, and lace.

The Italian immigrants in the United States are among our most thrifty and industrious laborers. Nearly all of our street "organ-grinders" are the music-loving Italians, and many of the fruit stands at the street corners in our large cities are kept by men or women who were born on the warm fruit-producing slopes of Italy.



In Venice the people go about in boats.

Make a sketch map of Europe, locating Italy.

ITALY.

I. Location and Boundaries.
II. Surface. Mountains. Po basin.
III. People and Occupations.
IV. Government.
V. Rome. Former greatness. Present condition.

60. Greece.

Name the eastern peninsula of southern Europe. What mountains are partly contained in it? What water east of Greece? Most of the islands in the Ægean Sea belong to this state.

When Rome became an empire, and spread her language, laws, and customs all over west-

ern Europe, the Romans really taught the civilization they had learned from the Greeks, and therefore when Europeans settled America, it was the Grecian civilization which they brought with them. So the civilization which we have to-day started in ancient Greece.

Greek in native dress.

All that remains of the Greek nation is the small kingdom south of the Balkan plateau. The language is much like that of ancient Greece, and the people are still among the foremost traders and sailors of southern Europe, but almost all the nations that learned civilization of the Greeks are now more prosperous than they.

The country is mountainous, and the very crooked coast line is fringed with mountainous islands, several of which are volcanic.

Wheat and barley are cultivated in Greece, and excellent figs and honey are also produced; but the most important product is the small dried grapes which in commerce are known as *currants*.

A Russian carriage.

Athens, the capital, is noted for the ruins of its beautiful ancient buildings (see picture on p. 92); but most of the beautiful statues which ornamented these buildings have been removed to the museums of London, Rome, or Paris.

Make a sketch map of Europe, showing Greece.

GREECE.

I. LOCATION AND BOUNDARIES.
II. SURFACE AND PRODUCTIONS.
III. CIVILIZATION. In ancient Greece. In the Roman Empire. In America. In modern Greece.
IV. ATHENS.

61. Russia.

What is the most eastern country of Europe? Compare it with the other countries in size. What land east of Russia? What waters north? What waters and countries west? South? What sea or lake southeast? Is the surface mostly flat or mountainous? In what parts are there mountains? In what two directions does the surface slope? Trace on the map the main divide of Russia.

Russia is the European part of the great Russian Empire, which extends eastward over northern Asia and southward beyond the Caucasus Mountains.

Through what waters must a vessel pass in sailing from Odessa, on the Black Sea, to St. Petersburg? From St. Petersburg to Archangel, on the north coast? Because coasting trade from one coast of Russia to the others is so difficult, the rivers of the country are greatly used for commerce, and they are connected by canals across the main divide, so that goods can be carried by river and canal from the Black Sea or the Caspian to the Gulf of Finland or the Arctic Ocean.

In what zone is the greater part of Russia?

Russian farmers.

In what other zone is part of it? Nearly all of Russia is farther north than the Great Lakes of America. Even in the south the rivers are frozen over for several months in winter. During the short, warm summers of northern Russia only the surface of the ground thaws, and as the water cannot sink into the frozen earth beneath, the whole region becomes a swamp called a *tundra*. Coarse moss covers this region. Farther south a great forest region occupies nearly one third of Russia. In the southwest are open plains, on which great quantities of food stuffs are grown. This is therefore the most thickly peopled part of the country. In the southeast so little rain falls that the fertile prairies give place to arid plains, called *steppes*.

A Russian church.

Most of the people in Russia belong to the white race. But some belong to the yellow race, as the Finns, who live north of the Gulf of Finland and are the dairymen and lumbermen of Russia; the Lapps and Samoyedes in the far north, who are hunters and fishers; and the Calmucks and Cossacks in the far south, who raise great herds of sheep, cattle, and horses.

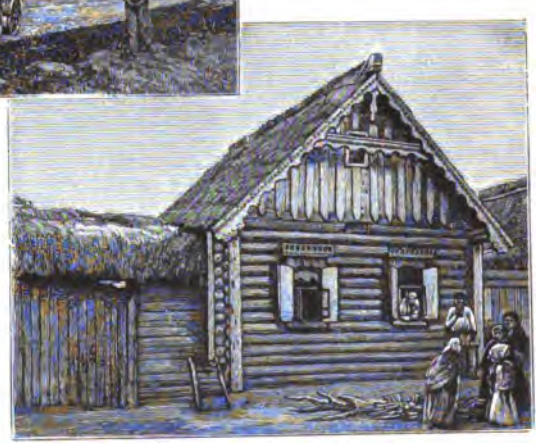
Farming is the chief occupation of the people, and grain and flax are the chief crops. More rye is grown than in any other country, and rye bread is the common food in Russia. Much more wheat is raised than is needed at home, so Russia, like the United States, sells great quantities of this valuable food to the thickly settled countries of western Europe.

Much of the flax is sold to Great Britain, to be made into linen cloth. But in southern Russia the flax is grown for its seed, from which linseed oil is made.

The farmers rarely live on their farms as in this country. A number of families are grouped into a village, or *mir*, which holds the surrounding farm lands and divides them among the villagers.

There are fewer mills and factories in Russia than in western Europe. Cotton and woolen cloths are made in some of the large cities, but most of the cloth used by Russian peasants is woven by their families during the long winters.

Petroleum is an important production of Russia. Find Baku. Although south of the Caucasus Mountains, it is in Russia. In the neighborhood of this town are the largest petroleum wells in the world. More petroleum is produced in this region than anywhere else except in the United States. Part of it is shipped by the Caspian and Volga to the interior of Russia, and part by railway to Batum, on the Black Sea, for export.



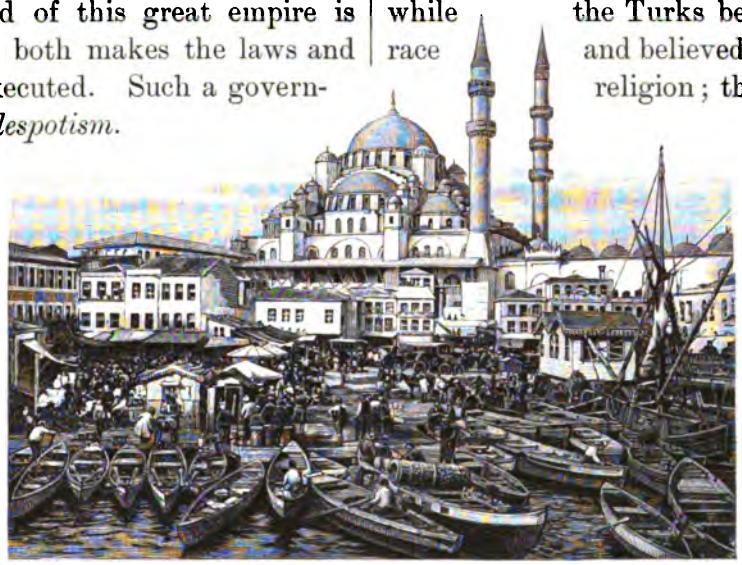
Farmer's cottage in Russia.

There is much trade in Russia by means of fairs, to which merchants come from other parts of Europe and from Asia. Find Nizhni Novgorod. A fair is held here every summer, where many thousand people buy their stocks of goods. For three months, when the fair is in progress, the river is filled with boats, and the

city with a bustling crowd of people, bargaining in its thousands of shops, or visiting its cathedral, its hotels, or its theaters. During the other nine months, not a human being is in sight in that part of the city: all is silent, and weeds and grass grow in its deserted streets.

The ruler or head of this great empire is called the *czar*. He both makes the laws and sees that they are executed. Such a government is called a *despotism*.

Find St. Petersburg. It is the capital of Russia and is one of the largest cities of Europe. Where is Moscow? It is the railway center of Russia. Odessa is a great grain market and the shipping point of southern Russia.



Scene in Constantinople.

Make a sketch map of Europe, showing Russia.

RUSSIA.

I. Location and Size.
II. Plain. Extent. Surrounding mountains. Bordering seas. Regions: tundra, forest, prairie, steppe.
III. Occupations. Farming. Grazing. Manufactures. Mining.
IV. Trade. Routes. Fairs.
V. People and Government.

62. States of the Balkan Peninsula.

What five small countries that you have not yet studied adjoin one another in southeastern Europe? What sea east of this region? What sea south? What sea west? What river flows through this region to the Black Sea? What mountains border this part of the Danube basin on the south? The part of Europe to the southeast of Austria-Hungary is often called the Balkan peninsula. Why?

Turkey, like Russia, is a despotism. The ruler is called the *sultan*. But the laws made by the sultan are much more selfish and oppressive than those made by the czar.

Many hundred years ago the Turks, a fierce race of yellow people who had conquered much of western Asia south of the Black Sea, crossed over into Europe and added the whole Balkan peninsula to the great Empire of Turkey.

Most of the people of the Balkan peninsula belonged to the white race and were Christians, while the Turks belonged to the yellow race and believed in the Mohammedan religion; thus the customs of the two peoples were very different. The Turks were cruel to the Christians, and robbed and oppressed them. Hence the Christians were discontented, and often tried to free themselves from Turkish rule.

About seventy years ago, Greece, aided by other Christian countries of Europe, succeeded in becoming independent. Afterwards Roumania, in the same way, freed herself from Turkey and became a kingdom. Still more recently Servia and Montenegro became independent monarchies, while Bulgaria, though still supposed to pay tribute to Turkey, has her own ruler, the *prince*, and is really an independent state.

Turkish water carrier.

Thus all that is left of Turkey in Europe is a narrow strip between Greece and Bulgaria, though the Turkish Empire

still includes much of western Asia. About half the people in European Turkey are Christians, and they are still trying to free themselves from the Turks.

Roumania and much of Bulgaria lie in the fertile valley of the Danube, and from them great crops of grain are sent down the river for export. There are many vineyards and rose farms on the slopes of the Balkan Mountains, and wine and the famous perfume, attar of roses, are made there.

The language of Roumania, unlike the languages of the neighboring countries of Eastern Europe, is something like the Latin, and it is thought the people are the descendants of Roman colonists who settled in that region nearly two thousand years ago.

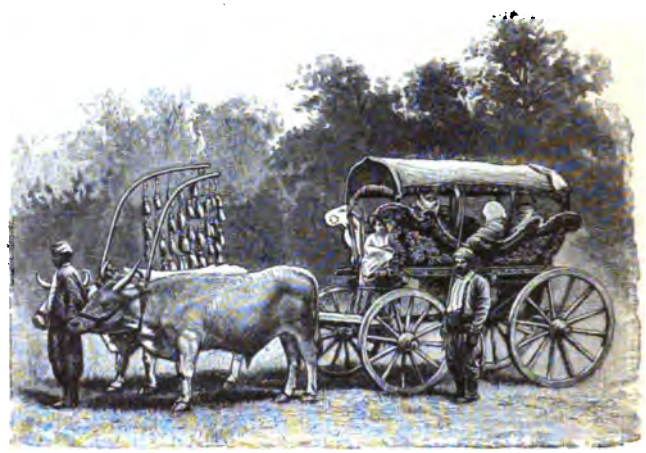
A fruit peddler in Bukharest.

What is the capital of Roumania? Of Bulgaria?

Servia and Montenegro are rough and mountainous, and are largely covered with forests. Corn forms the chief food of the people, and is grown in the river valleys. The wealth of the country consists in the herds of swine and cattle. What is the capital of each country?

The people of Turkey have been so badly governed that they are wretchedly poor. They have little wealth besides the forests and the herds of cattle and sheep. Small amounts of grain, tobacco, silk, and wine are produced. Turkish carpets and rugs made by hand are sold in Europe and America.

What sea is between the Black Sea and the Ægean Sea? What strait connects this sea with the Ægean Sea? With the Black Sea? What city is on the Bosphorus? Constantinople is the capital of the Turkish Empire. It contains the beautiful palaces and gardens of the sultan, and many fine *mosques*, or Mohammedan churches; but most of the houses are miserable hovels built of wood, and in consequence widespread conflagrations are common. The streets are narrow, filthy, and without sidewalks. The fine harbor is called the Golden Horn.



A Turkish cart.

Make a sketch map of Europe, showing the Balkan peninsula.

BALKAN PENINSULA.

I. Location and Boundaries.
II. The Turks. Character. Religion. Government.
III. States of the Peninsula. Names. Products.
IV. Constantinople. Location. Buildings. Streets.

Sheep on the steps of a Turkish mosque.

CORRELATIONS AND COMPARISONS.

Position and Climate. — What and where is Europe? How would you go from your home to its largest city? How long would it take to go? Which is farther north, Europe or the United States? How do they compare in climate?

Food for the People. — How does Europe compare in size with the United States? Which has the more people? What small kingdom in Europe is one of the most thickly peopled states in the world? Does Europe produce the food for all her people? Why not?

Where are the grain-growing regions of Europe? Why are they suited for grain growing? What grains are raised? In what river basins of America is grain grown for European countries? Where are the grazing regions of Europe? Why are they suited for grazing? From what countries of America is meat sent to Europe? What are the fishing regions of Europe? What countries are famous for cheese? What countries grow beets for sugar making? Why do they not grow sugar cane? What are the great wine-making countries of Europe? Where are raisins made? Where do oranges and lemons grow? Olives? Walnuts and almonds? Why do these fruits grow in this region?

Manufacture. — In what countries of Europe is manufacture a leading industry? Does Europe manufacture more goods than she uses? Name some manufactured articles which we get from Europe. Name a raw material shipped from our southern states to Europe. What is made of it? What countries of Europe manufacture cloth? Why are they manufacturing countries? Where is Manchester? What is manufactured there? What country of Europe produces most silk? What is silk? Where is Lyons? What countries produce linen cloth? What countries manufacture iron and steel? Where is Glasgow? What country is noted for its glassware? For its watches? Where is Geneva?

Transportation and Communication. — Are the rivers of Europe as large as those of North America? Which has more inland seas, Europe or the United States? Name the seas on which you think there are large numbers of vessels. Where are they going? Why? What city on the Bosphorus? What city on the Black Sea is the grain market for Russia? What city on the North Sea is the leading port for German steamship lines? What is the largest seaport in the Netherlands? Where is Liverpool? What facilities has Europe for internal trade? How is it connected with America? What nation first built roads in Europe? What famous mountains have been tunneled? Why?

Government. — What does the British Empire include? What and where is its capital? What is its form of government called? What is the form of government in the United States? How does a monarchy differ from a republic?

Name and locate the five empires in Europe. What is the capital of each? What is the form of government in Spain? Portugal? Norway and Sweden? Denmark? The Netherlands? Belgium? Italy? Greece?

How and when did the United States become a republic? What little, mountainous country of Europe has long been a republic? Where is it? What large and very important country of Europe is a republic? Name the republics of North America. Name the republics of South America. What were these countries before they became republics? What is Canada now?

Civilization. — Are the people of the United States savage or civilized? From what grand division was civilization brought to America? What savage race owned America before the Europeans took possession of it? Were the Europeans themselves ever in a savage condition? In what part of Europe did the people first become civilized? Where is the Grecian peninsula? What people conquered the Greeks and learned civilization from them?

Tell five things which are done in the United States to-day which the Indians have not yet learned to do. Do uncivilized people build large cities and fine buildings? What great city did the Greeks build? What was the most famous city in the Italian peninsula?

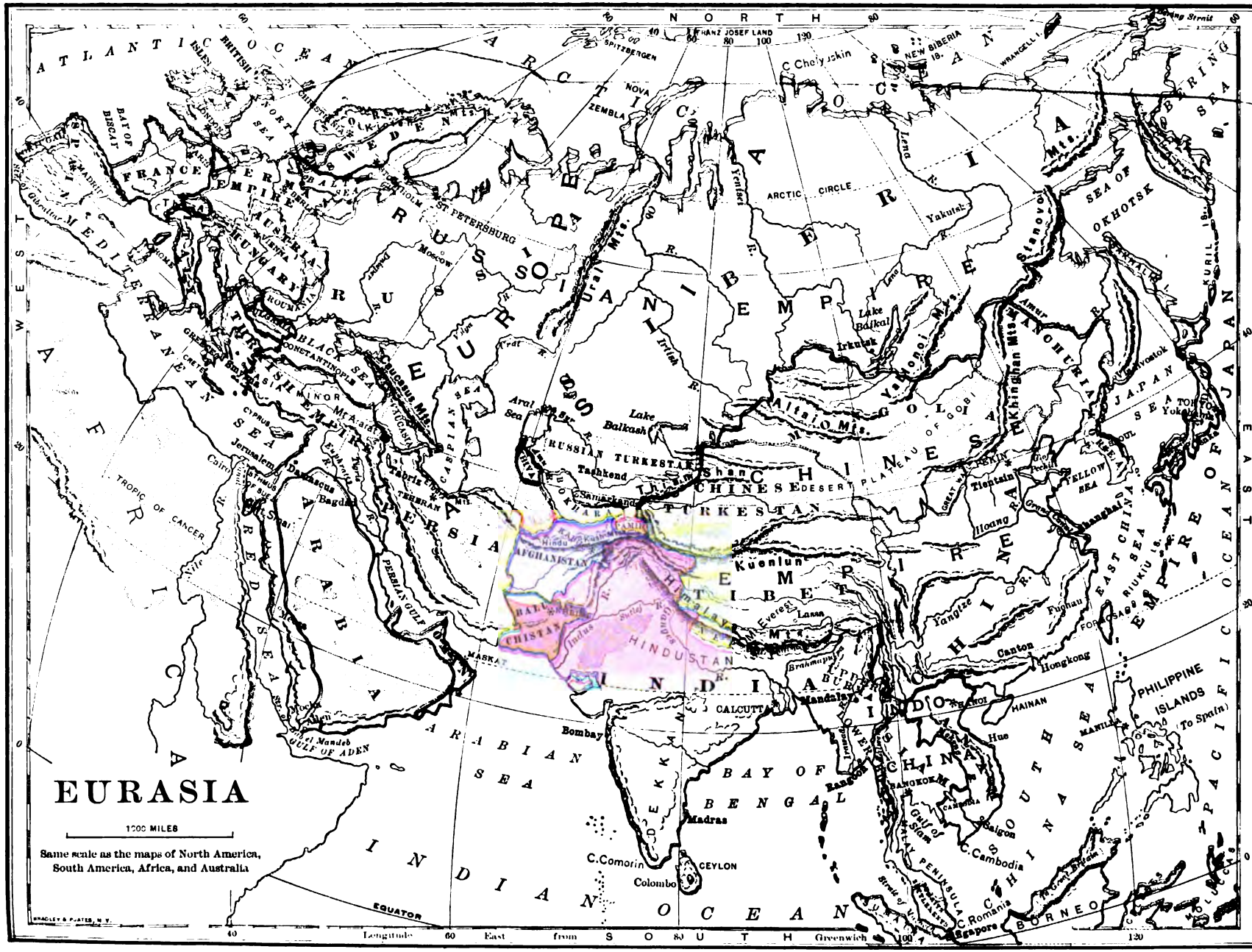
What did the great Roman Empire include? Into what countries of Europe did the Romans carry their civilization? What is true to-day of the languages spoken in all the countries of southwestern Europe? In what countries of North and South America do the people speak the Spanish language? The Portuguese? What civilization did the Europeans bring to America? What do you think is the most highly civilized grand division of the world? Why? What great country of Europe has been the last to learn civilization? Name one leading industry of western Europe and northeastern United States which is as yet but slightly developed in Russia. What European country is hardly yet counted among civilized nations?

Name the three chief cities of Europe in the order of their size.

Make a list of the capital cities of Europe.

Name the great European seaports, and tell what ships take away from each.

Name the great European manufacturing cities, and tell what is made in each.


EURASIA
1000 MILES
Same scale as the maps of North America, South America, Africa, and Australia
NORTH
Longitude 60 East from Greenwich
SOUTH
ATLANTIC OCEAN
ARCTIC OCEAN
PACIFIC OCEAN
INDIAN OCEAN
EUROPE
ASIA
AFRICA
ARABIA
INDIA
CHINA
JAPAN
RUSSIA
FRANCE
GERMANY
AUSTRIA-HUNGARY
TURKEY
SWEDEN
NORWAY
SPAIN
ITALY
GREECE
PERSIA
AFGHANISTAN
TIBET
MONGOLIA
SIBERIA
BAY OF BENGAL
ARABIAN SEA
RED SEA
MEDITERRANEAN SEA
BLACK SEA
CASPIAN SEA
YELLOW SEA
EAST CHINA SEA
SOUTH CHINA SEA
SEA OF OKHOTSK
BERING SEA
PHILIPPINE ISLANDS
BORNEO
CEYLON
ARCTIC CIRCLE
TROPIC OF CANCER
EQUATOR
St. Petersburg
Moscow
Constantinople
Vienna
Berlin
Madrid
Paris
London
Jerusalem
Damascus
Bagdad
Tehran
Tashkend
Yakutsk
Irkutsk
Lake Baikal
Peking
Tientsin
Shanghai
Hongkong
Canton
Bombay
Calcutta
Madras
Colombo
Singapore
Saigon
Bangkok
Manila
Hanoi
Hue
Mandalay
Maskat
Aden
Cairo
Khartum
Tripoli
Algiers
Tunis
Fez
Gibraltar
Malta
Cyprus
Crete
Rhodes
Smyrna
Odessa
Sebastopol
Kazan
Perm
Omsk
Tomsk
Yenisei R.
Lena R.
Ob R.
Irtish R.
Volga R.
Ural Mts.
Altai Mts.
Himalaya Mts.
Hindu Kush
Kuenlun Mts.
Khingan Mts.
Yablonoi Mts.
Stanovoi Mts.
Verkhoyansk Mts.
Kamchatka
Vladivostok
Nagasaki
Yokohama
Tokio
Osaka
Formosa
Riukiu Is.
Kuril Is.
Aleutian Is.
Behring Strait
Franz Josef Land
Spitzbergen
Nova Zembla
New Siberia Is.
C. Chelyuskin
C. Romania
C. Comorin
C. Cambodia
Gulf of Siam
Gulf of Aden
Persian Gulf
Red Sea
Bay of Biscay
English Channel
Irish Sea
North Sea
Baltic Sea
Gulf of Bothnia
Gulf of Finland
Aral Sea
Lake Balkash
Lake Baikal
Yangtze R.
Hoang R.
Mekong R.
Ganges R.
Indus R.
Euphrates R.
Tigris R.
Nile R.
Amur R.
Lena R.
Yenisei R.
Ob R.
Volga R.
Danube R.
Rhine R.
Elbe R.
Oder R.
Vistula R.
Dnieper R.
Don R.
Black Sea
Caucasus Mts.
Pyrenees Mts.
Alps
Carpathian Mts.
Balkan Mts.
Apennines
Atlas Mts.
Sahara
Arabian Desert
Persian Desert
Chinese Desert
Gobi Desert
Plateau of Gobi
Russian Turkestan
Chinese Turkestan
Afghanistan
Beloochistan
Hindustan
Tibet
Mongolia
Manchuria
Japan
Philippine Islands
Borneo
Sumatra
Java
New Guinea
Australia
Greenland
Iceland
Great Britain
Ireland
Sardinia
Corsica
Sicily
Balearic Is.
Canary Is.
Madeira Is.
Azores
Cape Verde Is.
Falkland Is.
Tierra del Fuego
Cape Horn
Cape of Good Hope
Madagascar
Mauritius
Ceylon
Maldive Is.
Laccadive Is.
Andaman Is.
Nicobar Is.
Sandwich Is.
Hawaiian Is.
Fiji Is.
Samoa
Tonga Is.
Society Is.
Marquesas Is.
Tuamotu Archipelago
Easter Is.
Galapagos Is.
Juan Fernandez Is.
Revillagigedo Is.
Aleutian Is.
Kuril Is.
Riukiu Is.
Formosa
Hainan
Sumatra
Java
Celebes
Moluccas
New Guinea
Australia
Tasmania
New Zealand
North Island
South Island
Chatham Is.
Auckland Is.
Campbell Is.
Antipodes Is.
Bounty Is.
Kermadec Is.
Norfolk Is.
New Caledonia
New Hebrides
Solomon Is.
Bismarck Archipelago
Caroline Is.
Marshall Is.
Gilbert Is.
Ellice Is.
Phoenix Is.
Line Is.
Marquesas Is.
Tuamotu Archipelago
Society Is.
Tonga Is.
Samoa
Fiji Is.
Hawaiian Is.
Easter Is.
Galapagos Is.
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Kuril Is.
Riukiu Is.
Formosa
Hainan
Sumatra
Java
Celebes
Moluccas
New Guinea
Australia
Tasmania
New Zealand
North Island
South Island
Chatham Is.
Auckland Is.
Campbell Is.
Antipodes Is.
Bounty Is.
Kermadec Is.
Norfolk Is.
New Caledonia
New Hebrides
Solomon Is.
Bismarck Archipelago
Caroline Is.
Marshall Is.
Gilbert Is.
Ellice Is.
Phoenix Is.
Line Is.

ASIA.

63. Position and Coast.

What is the eastern part of Eurasia called? Follow with your pencil the boundary between Asia and Europe, naming the mountains, river, and seas which lie on this boundary. (See map, p. 91.) How does Asia compare with Europe in size? Asia includes about one third of the land surface of the world.

In what zones is Asia? In what zone is the greater part? What ocean is north of Asia? What ocean is east? What strait separates Asia from North America? What ocean is south of Asia? What two seas are west of southwestern Asia? What isthmus connects Asia with Africa? What canal crosses this isthmus? What is the use of this canal? Name the strait through which the Red Sea opens. This name means "gate of tears."

What great bay and sea are south of Asia? Name six seas that wash the eastern shores of Asia. How are most of these seas separated from the rest of the Pacific Ocean? Name two peninsulas of eastern Asia. Name three peninsulas of southern Asia.

A pass in the Caucasus Mountains.

On which side of Asia are there many islands? From Formosa northeast to Kamchatka stretches a long chain of islands. What is its name? Where are the Philippine Islands? Sumatra, Borneo, and Celebes?

Many of the islands east and southeast of Asia contain volcanoes, from which terrible outbursts sometimes occur.

Practice making a sketch map of Asia.

POSITION AND COAST OF ASIA.

I. Location. Zones. Boundaries.
II. Each Coast Line. General direction. Projections. Indentations. Islands.

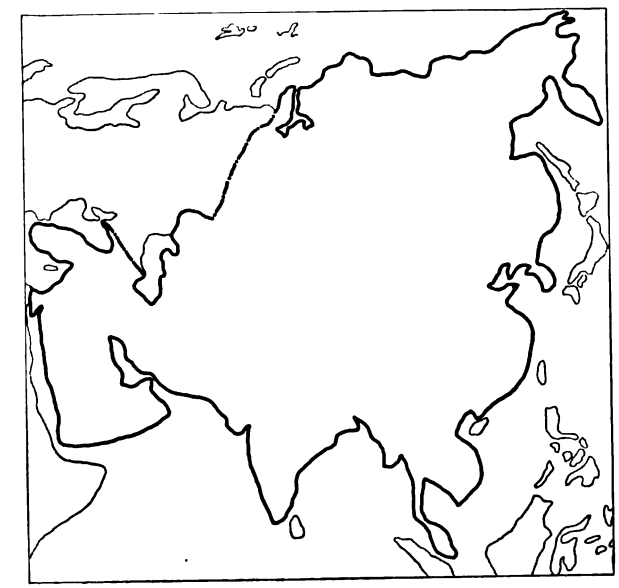
64. Surface.

(*With this lesson use the map on p.* 84.)

Does most of Asia lie in the highland or in the lowland part of Eurasia? Find the region from which all the high mountain chains seem to extend. This high mountain-crowned region is called the Pamir plateau or the "Roof of the World."

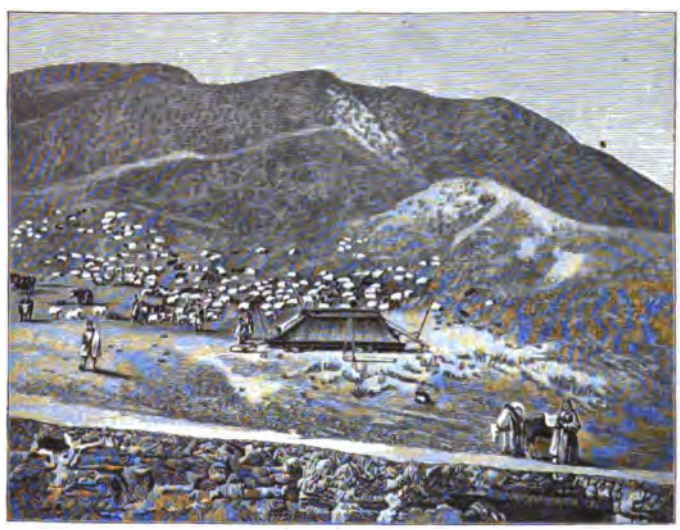
From the Pamir plateau a succession of mountain ranges stretches westward to the Black Sea, and three chains extend eastward — one to the northeast, one to the east, and one to the southeast.

What is the westward range



called east of the Caspian Sea? South of the Caspian Sea? Between the Caspian and the Black seas? From these ranges a low plateau extends southward nearly to the coast. A broad lowland, near the head of the Persian Gulf, divides this plateau into two parts. What is the eastern part of the plateau called? The southwestern part? What plateau is south of the Black Sea?

The mountain chain extending northeast from the Pamir plateau consists of many short, irregular ranges, known by different names in different parts. Name three of these ranges. The mountains extending southeast from the Pamir plateau are the loftiest range on the earth. Mount Everest, their highest peak, is over five miles high. What range of mountains extends eastward from the Pamir plateau?



A flock of sheep in Tibet.

Between the Himalaya Mountains and the Kuenlun is the highest large plateau in the world. It is twice as high, and almost as large, as the western highland of the United States. What is its name? What desert is between the Kuenlun and the Altai Mountains? It is a low plateau. What do you think about its climate? The plateau of Tibet is also dry, but being much higher is much colder than the Desert of Gobi.

These dry highlands produce little wealth, except animals valuable for their wool and hair. The herding of sheep, goats, camels, and yaks is the chief occupation. The yak is a hairy animal much like the ox.

The highlands are so broad and the mountains so lofty that they form a nearly impassable barrier between northern and southern Asia.

Like the peninsulas of Europe, the Asian peninsulas are either mountainous plateaus or spurs from the Eurasian highland.

The islands off the east coast of Asia are also really mountain ranges, the valleys between being covered by the ocean, and forming partially inclosed seas.

Northern Asia is a great lowland plain much like northern Europe. Along the Arctic Ocean is a frozen, moss-grown tundra; farther inland there are extensive forests; still farther south are open prairies, which in the southwest give place to steppes, covered with coarse grass.

Among the eastern and southern highlands are many broad lowland plains. Such are the plains of the Hoang, the Ganges, and the Indus rivers.

Model Asia; show mountains, plateaus, and lowlands.

SURFACE OF ASIA.

I. HIGHLANDS. Extent. General direction. Plateaus: Pamir; Tibet; Gobi; Iran; Asia Minor; Arabia; Dekkan. Mountains: Himalaya; Kuenlun; Thian Shan; Hindu Kush. Peninsulas.

II. LOWLANDS. Northern plains. Plains of the Hoang. Plains of the Ganges and Indus.

65. Drainage.

In what direction do the rivers of the great northern plain flow? Name the three largest. All these rivers have branches flowing nearly east or west, and with head waters so near each other that it is only a short distance across the divides. The hunters and fur traders go from Russia far into this plain by means of these rivers.

Name the four largest rivers of the Pacific slope. The Amur flows through one of the best wheat-growing regions of Asia. The Hoang, or Yellow River, is sometimes called "China's Sorrow," because of the loss of life and property caused by its overflows. The Yangtze and the Mekong rise in the high plateau of Tibet and descend to the lowlands in deep gorges or canyons, through which few white men have ever passed.

What two rivers flow into the Bay of Bengal through the same delta? What river flows into the Arabian Sea? These three rivers drain both the north slope and the south slope of the Himalaya Mountains. What rivers flow into the Persian Gulf?

Beginning on the Ural Mountains, draw a line around the great basin whose rivers do not reach the ocean. This interior basin occupies about one quarter of Asia, and contains many large salt lakes. Why are they salt? Aral Sea is nearly as large as Lake Superior. Lake Balkash is another large salt lake.

There are fewer fresh-water lakes in Asia than in North America. The only large one, Lake Baikal, is about half as large as Lake Superior. What river is its outlet? Much trade is carried on over this lake by means of steamboats during summer and by ice sleds in winter.

Sketch Asia; locate its large rivers.

DRAINAGE OF ASIA.

I. NORTHERN SLOPE. Ob. Yenisei. Lena.
II. EASTERN SLOPE. Amur; Hoang; Yangtze; Mekong.
III. SOUTHERN SLOPE. Brahmaputra; Ganges; Indus; Tigris and Euphrates.
IV. LAKES.

66. People.

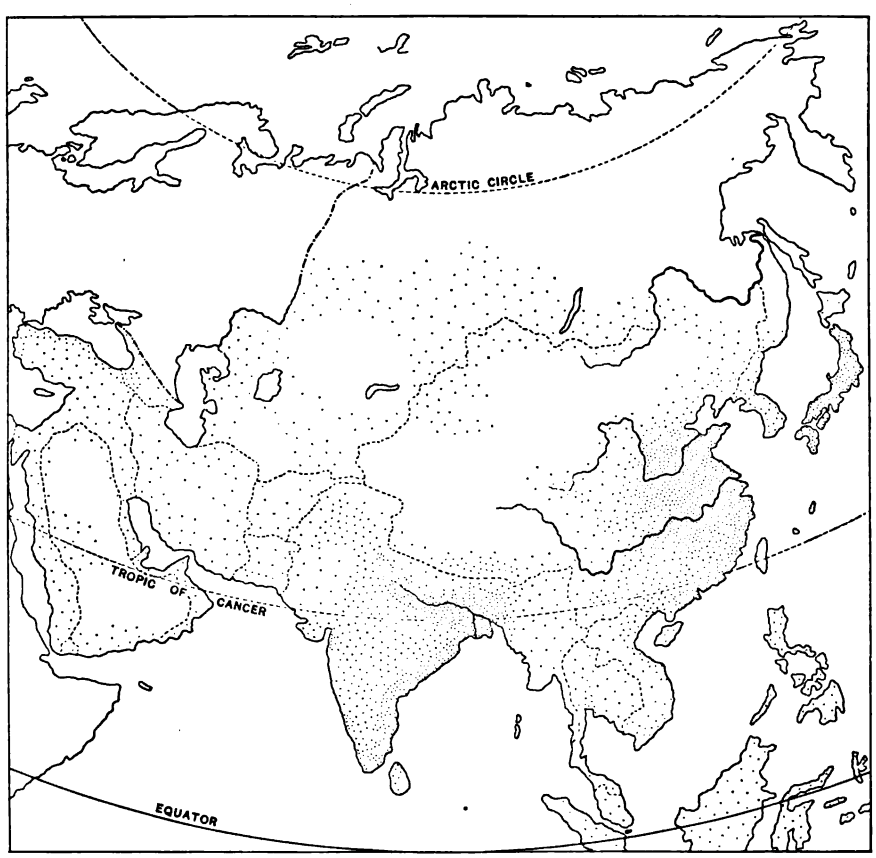
What thickly peopled islands lie east of Asia? What two regions contain most of the people on the mainland? What parts of Asia contain very few people?

The climate of southeastern Asia is so warm and moist that food plants grow there in abundance. Nearly half the people of the world live in this part of Asia.

Where it is too cold or too dry for food plants to thrive, few people are found.

In Asia, even more than in Europe, the people in the various countries differ in language, in religion, and in manners and customs. There are at least three totally different races in Asia.

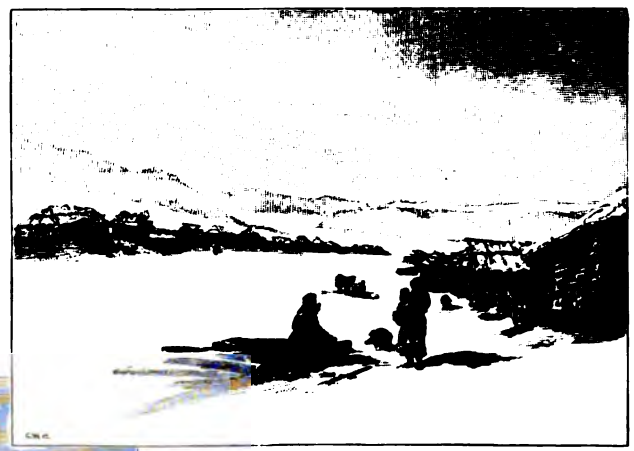
The people of the yellow race live mainly in the eastern and northern parts of Asia. (See map, p. 86.) How do they differ from people of the white race? What people of this race live in North America? In Europe?



The dots show where most of the people in Asia live.

The people of the brown race live mainly in the islands southeast of Asia, and in the Malay peninsula. Many of them are still savages, yet they are generally easy to civilize.

Most of the people of India and of southwestern Asia belong to the white race, though they have darker skin than the people of Europe. It is believed by many that originally the largest branch of the Caucasian or white race lived in the highland region in the neighborhood of the Hindu Kush Mountains, and that from this region they spread southeastward into India, and westward into the various countries of Europe.



A Siberian village in winter.

Siberian sledges.

PEOPLE OF ASIA.

I. DISTRIBUTION. Northern plain. Plateau and desert belt. Alluvial plains.

II. RACES. Caucasian. Mongolian. Malay.

67. Siberia.

What is the northern division of Asia? In what zones is it? What waters are north of Siberia? What waters east? From what division of North America is it separated by Bering Strait? Describe the surface of Siberia. The drainage.

Siberia is part of the great Russian Empire. Many of the people are of the yellow race. In the north they are hunters and fishers, and in the south they are herders and farmers. But many white people have come into Siberia from Russia. The farmers of Russia can get land in Siberia free from rent, and hence many of them have moved eastward and settled there. In what direction has the settlement of our country advanced?

Merchants of Bokhara.

People in Russia who offend the government are often sent to Siberia as a punishment. If their offenses are slight, they may live as they choose in the villages of Siberia; but those who receive severe punishment are made to work in the mines. To speak or to write against the government, or to own books in which the government is criticised, is sufficient cause for exile to Siberia, and many are sent for such causes every year.

The mines are the chief wealth of Siberia; they yield much gold, silver, and platinum, a metal somewhat like silver. Some of the best graphite, of which lead pencils are made, comes from Siberia.

In the cold northern part of Siberia are found the bodies of huge hairy elephants frozen fast in the icy soil, and preserved by the cold. Their tusks are sold for ivory.

Central Siberia, like central Russia and central Canada, is a vast

forest region where many animals are trapped for their valuable furs. There are many wolves in these forests.

In the more open region south of the forests a railroad is being built across the whole country from east to west. Most of the inland traffic is now carried on by *caravans* or parties of traders with pack animals. Much of the tea used in Russia is carried from China by these caravans.

Find Tashkend. It is the largest city of Russian Turkestan. Coarse cotton cloth and leather goods are made in the towns and villages near by. Khiva and Bokhara are native states which really belong to Russia. Where is Irkutsk? It is the chief market of eastern Siberia. Find Vladivostok. It is the great seaport of the Russian Empire on the Pacific Ocean.

A Chinese girl.

Sketch Asia; locate Siberia.

SIBERIA.

I. LOCATION AND SURFACE.
II. CLIMATE.
III. PRODUCTIONS. Minerals. Ivory. Furs.
IV. RUSSIAN EXILES.

68. Chinese Empire.

In what part of Asia is the Chinese Empire? In what zone is most of it? Of what five countries is it composed? Which of these countries lie in the highland region? Which lies partly in the lowlands? What two great rivers drain the greater part of China? Where do they rise? Into what waters do they empty? Of what ocean are these waters a part? The Hoang River has a great delta.

The Chinese Empire is somewhat larger than the United States, and is the home of the greater part of the yellow race. The four countries belonging to China in the plateau and desert region of central Asia cover the largest part of the empire, but contain few people. The fertile and thickly settled lowlands of China proper contain nearly one fourth of all the people in the world.

China is one of the oldest of nations. The Chinese printed books and made gunpowder long before these inventions were known in Europe; yet they have made little progress, but live very much as their ancestors did thousands of years ago. They have very little machinery, and what they have is awkward and old-fashioned.

Until a few years ago the Chinese were not allowed to leave their country, nor were strangers allowed to visit it; and even now strangers are seldom allowed to travel in China far from the coast.

The Chinese dress in loose robes or jackets, with full sleeves, which they use as pockets. Their shoes have thick white soles. They shave off their hair except a lock on the crown, which they wear in a long braid. Chinese ladies can seldom walk well, because when they were young their feet were kept tightly bandaged to prevent them from growing. Thus their feet, though small, are terribly deformed.

The Chinese are very polite to one another. Even after he has grown up, a Chinaman obeys his parents while they are alive and worships them after they are dead. Although the Chinese seem stupid in not adopting new ways, they are very clever in doing things in their old-fashioned ways, and they are very industrious.

A Chinese barber.

In China proper farming is the chief occupation. Almost every foot of the land is cultivated, and

along the rivers great rafts made of a kind of tall reed or cane, called *bamboo*, are covered with earth and used as gardens. Many thousands of people live on these rafts and on flat-boats which are moored with them.

On the hill slopes tea and many fruits and vegetables are raised, but in the lowlands barley and rice are the chief crops. The rice is grown on land that can be easily flooded, and

Picking tea in China.

Planting rice in China.

thousands of men and women may sometimes be seen wading in the rice fields, tending their crops.

Tea is the leaf of a shrub three or four feet high. The leaves are picked three or four times a year. They are heated in shallow pans, rolled with the hands upon a table, and then dried in sieves over charcoal fires. Much of the tea is shipped in lead-lined boxes, to England and America. Quantities of an inferior kind are pressed into "bricks" and sent overland on the backs of camels into Siberia and Russia.

Chinamen eat very little beef or mutton, but every hut has its pig, and ducks, geese, and chickens. Fish cooked in lard or in castor oil is much used for food; but the chief food in China consists of rice and tea.

Famines often occur in China, when thousands of people starve to death. This is because, when the crops fail in one part of the country, food cannot be quickly brought from other regions, since there are no railroads or good roads, and few horses and wagons. In much of China almost all the merchandise is carried on the backs of men, or on rude wheelbarrows, or on the rivers or canals, in boats called *junks*.

The Chinese make many excellent and beautiful things, but mostly by hand. The best pottery and porcelain used to come from China, and to this day we call it *china ware*, even though it is made in the United States. Chinamen generally dress in cotton cloth made in China. It was from the Chinese that the world learned to make silk, and much of the finest and softest silk cloth still comes from China; but most of the silk exported from China is raw silk which is manufactured into cloth, ribbon, or thread in Europe or America.

Manchuria is crossed by forest-covered mountains. Between them are many wide and fertile valleys, in which much wheat is raised. Mon-

A Chinese wheelbarrow.

golia and Chinese Turkestan are mostly desert or arid land, where the people live in a half-savage state, tending herds of horses, cattle, and camels. These people used to be robbers, and long ago one of the emperors of China built a great wall twelve hundred miles long to protect his people from them. Much of this wall is still standing. The high, cold plateau of Tibet has seldom been visited by white men.

Find Pekin. It is the capital of the Chinese Empire. Where is Canton? It is one of the largest of the many large cities of China. Find Shanghai. It is the greatest seaport of China and one of the few Chinese cities where foreigners are allowed to live.

Hongkong, a small island near the coast, belongs to Great Britain. A great many foreign merchants live there in order to trade with China.

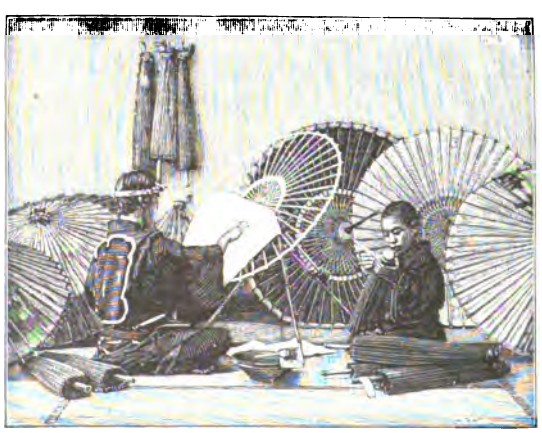
When, a few years ago, Chinamen were first permitted to leave China, many came to our Pacific states as laborers. But our people did not like them, and our laws do not now permit Chinese laborers to come to the United States.

What is the name of the peninsula northeast of China? It was once part of the Chinese Empire, but is now an independent kingdom. Like China, Korea has had very little to do with the outside world. What is the capital of Korea?

Sketch Asia, showing the Chinese Empire.

CHINESE EMPIRE.

I. LOCATION AND SIZE. Countries.
II. SURFACE. Plateaus and deserts. Great fertile plains.
III. CLIMATE AND SOIL.
IV. PRODUCTS. Rice. Tea.
V. PEOPLE. Race. Distribution. Appearance. Food. Handiwork. History.
VI. TRANSPORTATION.
VII. CITIES.

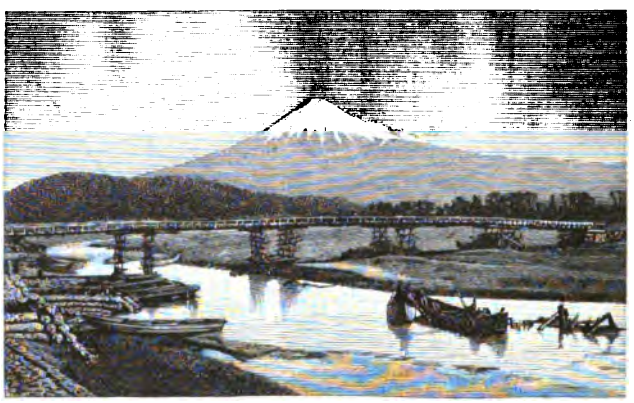


Making parasols in Japan.

69. Japan.

What island empire east of China? In what zone are most of these islands? What is the name of the largest island? It is a little larger than Kansas. What is the name of the large island at the south end of the group? What sea lies between Hondo and the mainland? What ocean is east of these islands? What do you know of the formation of these islands?

The Japanese have been called the "Frenchmen of Asia" because they are so polite; they



Volcano Fujiyama in Japan.

have also been called the "Yankees of the East" because they are so energetic.

The Japanese islands are mountainous, and the scenery is very beautiful. There are many volcanoes and hot springs among the mountains, and earthquakes are frequent. The summers are warm and moist, but the winters are quite cold.

It is only in recent years that the Japanese have allowed vessels from all nations to visit their seaports. Since the foreigners were admitted Japan has made wonderful progress in civilization. Railways and telegraph lines have been built; good roads have been made; daily newspapers are published; a university has been established; and every town and village has its schools.

The Japanese look somewhat like the Chinese, to whom they are related. The men are short but sturdy; the women small and slight. The women paint their faces white and their lips red, and fasten up their long black hair with wooden pins.

The houses are made of bamboo, with sliding walls in front which are pushed aside during the day, showing the whole interior. Dressed in his long loose gown with flowing sleeves, the Japanese squats upon the floor and sells his goods, using the floor as a counter. He eats his meals from a tiny table, and manufactures by hand — sometimes by foot also, for his toes are almost as useful as his fingers. His wife squats near him, braiding her hair, or playing a kind of guitar, or boiling the rice for his dinner, while the children run about at play, the older one with the baby strapped to his back. At night the family close the sliding walls, and, after taking a scalding hot bath, pull out of the closets the quilts which serve as beds, and go to sleep on the floor, their heads resting on little padded wooden stools. Among the poorer people, rice, fish, radishes, and tea are almost the only food.

A Japanese carriage or jinrikisha.

A Japanese store.

The Japanese, like the Chinese, raise silkworms, and a great deal of tea. The camphor tree, and the tree from which is obtained the gum used in making lacquered ware, grow on the mountain slopes. The Japanese are very fond of flowers; they call their country the "Land of the Chrysanthemum," and have festivals in spring in honor of the cherry blossom. Their small farms have no fences, for there are few cattle and fewer horses. In the cities passengers are drawn by men, in little two-wheeled carriages called *jinrikishas*.

Almost everything made in Europe and America is also manufactured in Japan. Japanese silk, tea, porcelain, and lacquered ware are exported. The largest share of the exports of Japan is sent to the United States; but the imports come more largely from Great Britain.

Steamship lines connect Japan with San Francisco, Puget Sound, and the chief ports of Europe and Asia. Yokohama is the chief seaport. Where is Tokyo? It is the capital. Its recent growth has been even more rapid than that of Chicago.

It was an American who first induced the Japanese to trade with the rest of the world, and many young Japanese attend our schools and colleges.

Sketch Asia; locate Japan.

JAPAN.

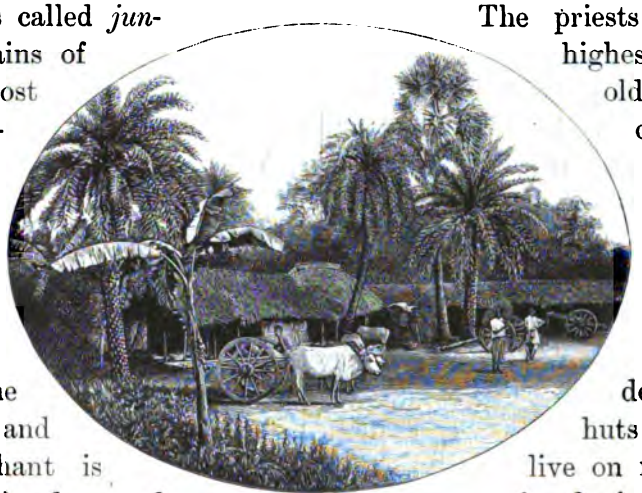
I. Location and Surroundings.
II. Climate.
III. Productions. Agricultural. Manufactured.
IV. People. Appearance. Food. Houses. Progress.
V. Cities.

70. India.

What three peninsulas project southward from Asia? What is the name of the middle peninsula? In what zones is India? What mountains north? What waters east? West? What island south? Describe the surface of India. The drainage.

For half the year southwest winds blow over India, bringing heavy rains from the Indian Ocean. During the other half of the year dry winds blow from the north. A wind which reverses its direction regularly in this way is called a *monsoon*, which means "season."

The great glaciers and snow-capped summits of the lofty Himalayas get their snow from the southwest monsoon. The lower slopes of the mountains are covered by forests; at their foot are dense thickets called *jungles*. The alluvial plains of northern India are the most fertile lands of the country, and are covered with many villages, almost hidden by palm trees.

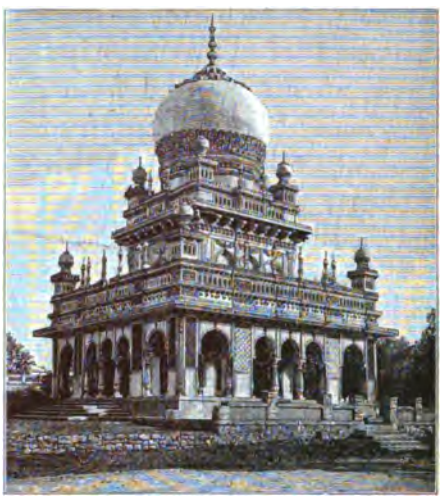


Country scene in India.

In the jungles are many wild animals — the tiger, the leopard, the elephant, the rhinoceros, and the hyena. The elephant is trained to carry heavy burdens and to drag timbers. The buffalo also is found, and the forests are filled with monkeys and birds. The cobra, the most poisonous snake known, is found in India, where thousands of people die of its bite every year.

The rhinoceros.

India is thickly inhabited by people of many different races and religions. The greater part are Hindus, who belong to the white race. They are divided into classes, called *castes*, which never mingle with one another.



A tomb in India.

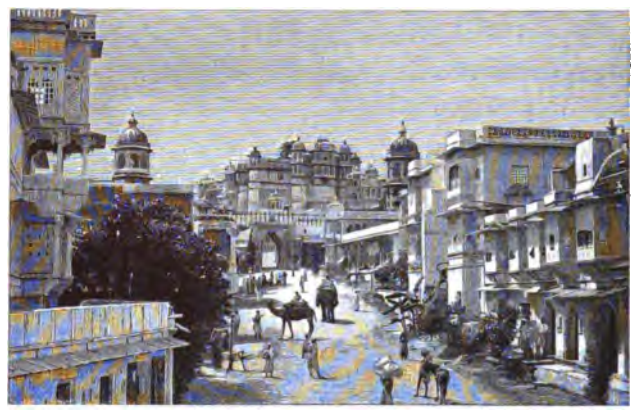
The priests or Brahmans are the highest caste. They have very old books filled with poetry or stories of their gods. The lowest castes are miserably poor. They wear only a strip of cotton about the hips, with perhaps another tied around the shoulders; they sleep in mean huts on short rope beds, and live on rice and water, with an occasional piece of fish. The women of the lower classes work in the fields, the mother with her baby on her back or astride of her hip. Many of the women of the upper castes are kept hidden in the inner rooms of the houses, going abroad only in covered chairs or boxes, which are suspended from poles carried on the shoulders of men.

In India there are many magnificent palaces, temples, and tombs, some hollowed out of the rock as caves, and some built of marble and decorated with wonderful carvings or brilliant gems.

Most of the domestic animals with which we are familiar — the horse, ox, sheep, dog,

cat, hog, and chicken — came originally from this part of Asia, accompanying the white people to Europe, and from Europe to America. Many of our grains, fruits, and vegetables also came originally from this region.

Nearly all of India, and the island of Ceylon also, belong to Great Britain.



Street scene, India.

Agriculture is the chief occupation in India. In the Ganges valley there are many irrigating canals, and in the Dekkan plateau are large tanks to save the water which falls during the wet season.

Rice, peas, and millet, a grain like corn, are the chief food of the people. Wheat and sugar cane also are grown. The wheat is sent to Europe through the Suez Canal. The poppy is cultivated for the opium made from its juice.

Much flax is grown for the seed, from which is pressed linseed oil. We use this kind of oil in mixing paints. Cotton, jute, and silk are also produced. Part of the cotton is sent to England, where it is made into cloth, much of which is sent back to India. The jute is used in making coarse bags and rope.

The Hindus manufacture fine shawls, carpets, and rugs, and such delicate cotton cloth that they call it "woven wind." They also make fine gold embroidery thread, and beautiful jewelry. They have some modern factories, but most of their factory-made goods come from Europe.

The Ganges valley has many railroads, and narrow-gauge railroads lead to some of the "hill stations," as English towns in the mountains are called.

Where is Calcutta? It is the capital and leading seaport of British India. What port is on the west coast? It has a good harbor, and is connected with Calcutta by a railway. Where is Madras? It also is a market and seaport. What city is in Ceylon? From this port tea and cocoanut oil are sent to England.

What fortress in the Spanish peninsula do the British own? They also control the Suez Canal. What town is on the Gulf of Aden near the mouth of the Red Sea? The English own this town. All these possessions make it possible for England to control the route of vessels from England to India.

India is our rival as a cotton- and wheat-producing country, for her products are sold to the English, who are also our chief customers.

Sketch Asia; locate India.

Elephants used for carrying passengers.

INDIA.

I. Position, Extent, and Boundaries.
II. Surface. Plains. Plateau.
III. Climate and Rainfall.
IV. Products. Vegetable. Animal.
V. People. Classes. Occupations. Government.
VI. Cities. Calcutta. Bombay. Madras.

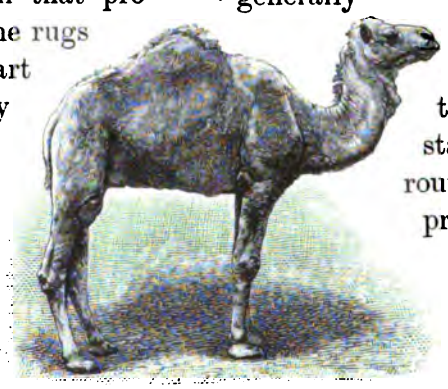
71. Southwestern Asia.

What five countries in southern Asia west of India? Which has no seacoast? What sea is north of Persia? What gulf south? What empire owns the western part of the Arabian plateau? What three seas border Asiatic Turkey? What waters wash the shores of the Arabian peninsula? Describe the surface of southwestern Asia. Its drainage.

Southwestern Asia is a rugged plateau with little low land except the alluvial plain of the Tigris and Euphrates rivers. Much of it is a desert; for the southwest winds, which in India blow from the ocean, in this region blow over a hot land, and therefore bring little rain.

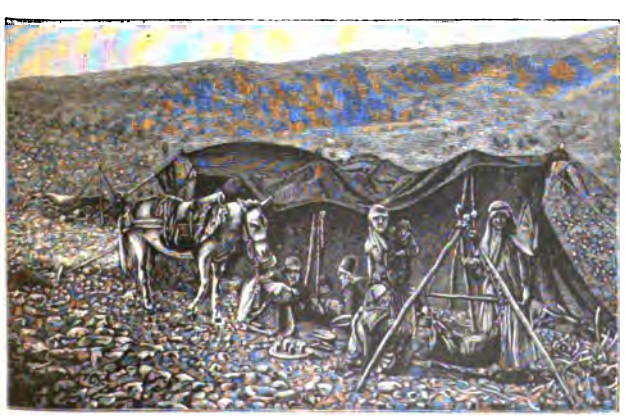
Figs and dates are raised for food and are exported in great quantities. Grass is really the most important food stuff, for it supports the herds of camels, goats, and sheep which form the chief wealth of the region.

There is no finer wool than that produced in these dry plateaus. The rugs and carpets made in this part of Asia have a market in every part of Europe and the United States.

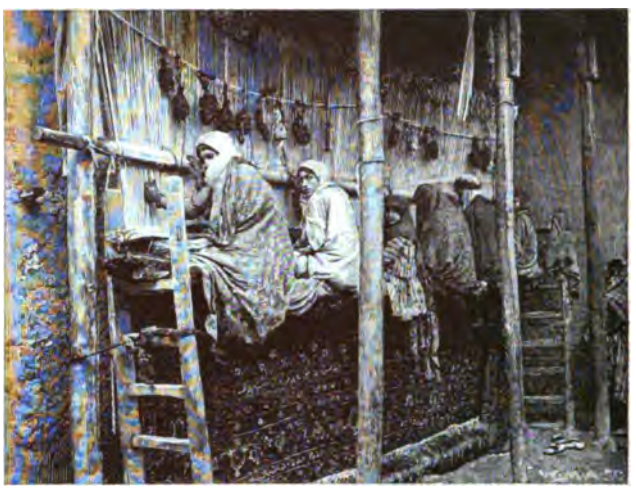


The Arabian camel.

The camel is of great importance, for it can travel long distances over the dry and barren deserts without food or drink. It is often called "the ship of the desert." Trains of camels sometimes carry loads of merchandise a distance of several thousand miles.



Arabians.



Weaving a Persian rug.

Excepting the ruling class in Turkey, who belong to the yellow race, the people of southwestern Asia belong to the white race. They are generally employed in herding, trading, and weaving by hand.

Afghanistan and Baluchistan are two small mountainous states, through which caravan routes lead into India. Baluchistan practically belongs to England.

The Persians are noted for the silks, carpets, and fine shawls which they weave by hand. Name the capital of Persia.

The Arabs of the plateau of Arabia are closely related to the Jews, whose history is contained in the Old Testament, and whose country lies between northern Arabia and the east coast of the Mediterranean Sea.

The Arabs are generally wandering herdsmen, each tribe being governed by a chief called a *sheik*. The most flourishing Arabian state is Oman, in the southeast.

Most of Arabia is a desert, with a few fertile tracts where the Arabian horses are raised. There are fertile lands near the coast, too, where dates and coffee are grown.

The Turks, who form the ruling class in Asia Minor, are followers of Mohammed. There are many Christians, however, of the

A street in Yafa, the seaport of Jerusalem.

white race, to whom the Turks are very cruel. They are the weavers, traders, and bankers.

Find Jerusalem. It is famous for many of the scenes in the life of Jesus. Find Smyrna. It is a noted seaport. Damascus is one of the oldest cities in the world. The cloth called *damask* is still made in this city. Where is Mecca? It is the birthplace of Mohammed.

Make a sketch map of Asia, showing the five southwestern countries.

SOUTHWESTERN ASIA.

I. PHYSICAL. Surface. Coast. Climate.
II. POLITICAL. Countries. Chief cities.
III. INDUSTRIAL. Occupations. Products. Trade. Export.

72. Southeastern Asia.

Where is Indo-China? What bay is west? What sea is east? What gulf opens into this sea? What peninsula in the south? What island is southwest? What strait separates the peninsula from the island?

The climate, animals, and food stuffs of Indo-China are much like those of India. The islands near by, however, produce, among mineral products, tin; among animal products, ivory; and among vegetable products, ebony, hemp, camphor, and a great variety of spices.

Most of the people of Indo-China belong to the yellow race, but in the southern part there are many Malays.

Burma, in the west, belongs to Great Britain, and is governed as part of British India. Name two Burmese cities.

Siam is an independent native kingdom. The country is sometimes called the "Land of the White Elephant," for white elephants are held so sacred there that they are treated as if they were kings. Most of the trade is in the hands of European and Chinese merchants. Teak, a hard wood used in shipbuilding, comes from the forests. Precious stones are found in Siam. What is the name of the capital?

Anam and Cambodia are French possessions. Much of the trade is with France. Rice, sugar, and raw silk are exported.

The Malay peninsula contains a British colony in the southern part, and several small native states. Spices and gutta-percha, a kind of rubber, are the chief products. About two thirds of the tin used in the world is brought to Singapore to be shipped to Europe.

Burmese girl.

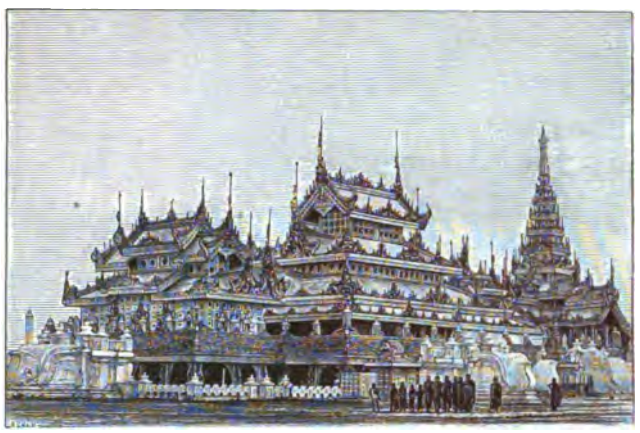
The islands southeast of Asia are often called the East Indies. Where are the Philippine Islands? They are a colony of Spain, and export sugar and Manilla hemp, which is used in making ropes and cables for ships.

The islands southeast of the Malay peninsula (see map, p. 137) belong to the Netherlands, and are called the Dutch East Indies. Java is the most im-

portant. Sugar, coffee, tobacco, spices, and tin are the chief products of these islands. The land is tilled by Chinese and native Malay laborers.

Batavia is the capital of the Dutch possessions, and is a great commercial city.

The islands of Banca and Billiton, near Sumatra, are noted for their tin mines.



A temple in Siam.

SOUTHEASTERN ASIA.

I. PHYSICAL. Surface features. Coast. Climate. Neighboring islands.
II. POLITICAL. European owners. Native government. Races.
III. INDUSTRIAL. Productions. Important mineral export.

CORRELATIONS AND COMPARISONS.

Size. — Compare Asia with North America in size. With South America. With Europe.

Plateau of Tibet. — How far north of the Tropic of Cancer is the plateau of Tibet? What part of the United States is about as far north? Compare the climate of the United States with that of Tibet. Account for the difference. Compare the climate in the plains of India with that of Tibet. Explain this difference. How does the plateau of Tibet compare with the plateau of Mexico in size and elevation? With the plateau of Bolivia? With Switzerland? Compare the Himalayas with the Rocky Mountains. With the Andes. With the Alps.

Desert Region of Asia. — Locate the desert belt of Asia and name the countries which it includes. Why are these regions deserts? What animal peculiar to desert regions is found in all these countries? In which of these countries are horses found? Sheep? The yak? Is this desert region thickly peopled? Why? Are the people civilized or uncivilized? What are their occupations in Tibet? In Chinese Turkestan? In Persia? In Arabia? In Turkey? Has this region any large cities? Where is Mecca, and for what is it noted? Smyrna? Jerusalem and Damascus? Where is the country of the Jews?

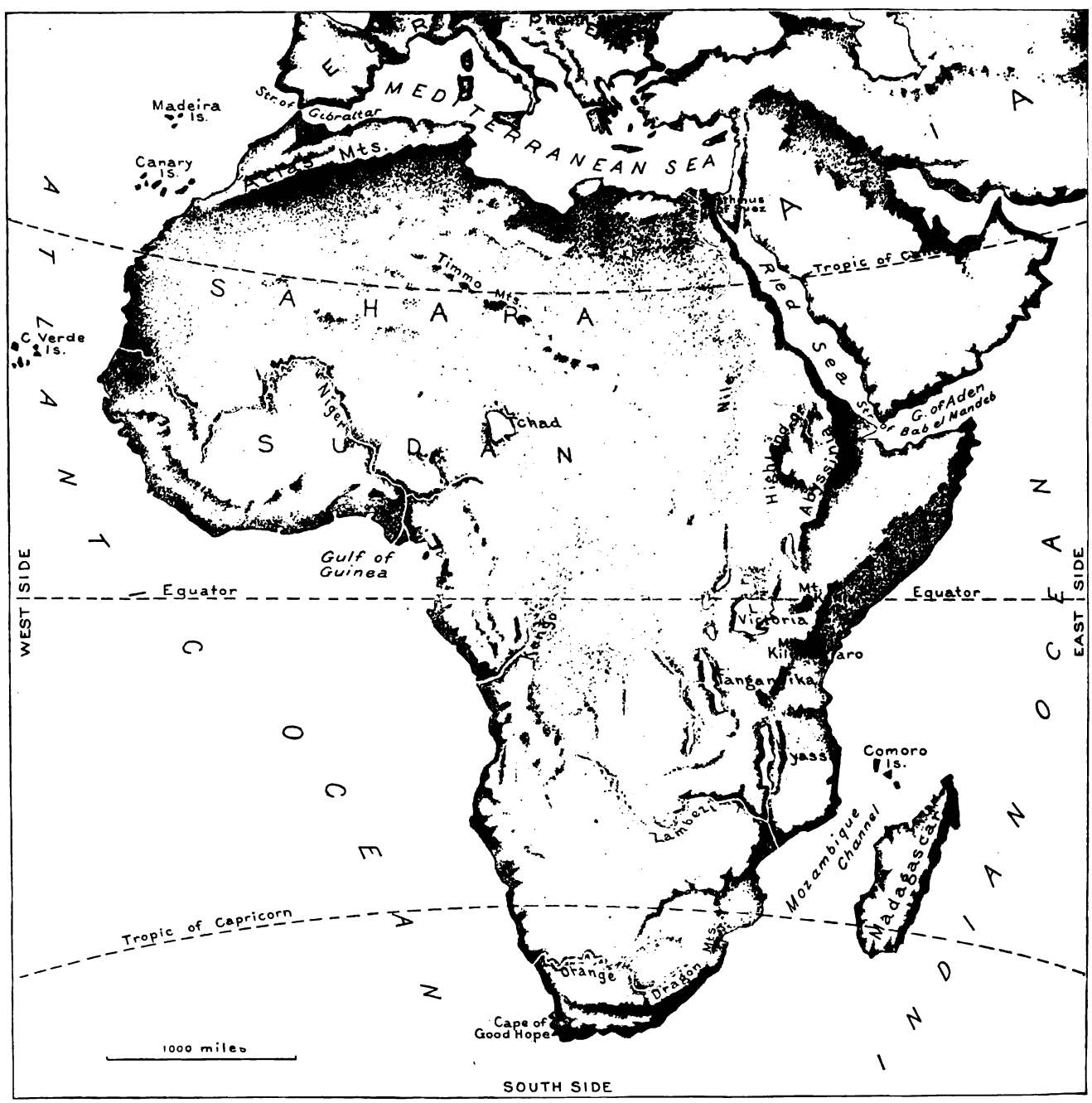
Great Siberian Plain. — Where is the great Siberian plain? What is its continuation in Europe called? In what countries are the Arctic regions of America? Name the large rivers of the world which flow into the Arctic Ocean. Are their basins productive? Why? Where are the frozen, marshy, mossy plains of these river basins? Where are their forests? What fur-bearing animals are found in these Arctic regions? What people in these regions in Asia? In America?

China and Japan. — What two great Mongolian empires in eastern Asia? How does the Chinese Empire compare with the United States in size? What two rivers drain the great plains of China? What are the chief articles of food in China? How are they cultivated? In what parts of China is rice cultivated? In what parts is tea cultivated? By what two routes may it be shipped from China to the United States? How is tea sent overland from China to Europe? Is silk manufactured in the United States? What country in Europe leads in the making of silk? From whom did the Europeans learn to make silk? To whom do the Chinese sell silk? Which is more advanced, European civilization or that of China? What could China learn from Europe and the United States? When did Japan begin to advance rapidly in civilization?

India. — Where did the white people of Europe come from originally? Of America? When the white people migrated from Asia to Europe, what animals did they take with them? What plants? Where are the fertile regions of India? What are the leading crops raised? Which form the food of the people? What grain is shipped to Europe? By what route do steamships go from India to Liverpool? Where is Calcutta? Madras? Bombay? What raw material is shipped from India to England? From what other country is the same kind of raw material shipped to England?

Indo-China. — Where is Indo-China? Of what countries is it composed? In what respects is it like India? Compare the East Indies with the West Indies in location, climate, and productions. With what common metal is the world supplied mostly from the East Indies? Why were the West Indies so called?

AFRICA.



AFRICA. (Same scale as maps of North America, South America, Eurasia, and Australia.)

73. Position and Coast Line.

Compare this map of Africa with those of North America and of Eurasia. How does Africa compare with those grand divisions in size? What sea is north of Africa? What ocean and gulf are west? What sea, gulf,

and ocean are east of Africa? By what isthmus is Africa joined to Asia?

What part of Africa is crossed by the equator? In what zones is Africa? It is the hottest of all the grand divisions. Why?

Which has the greater number of bays and peninsulas — Africa or Eurasia? Africa or North America?

For what was Columbus searching when he discovered America? At that time Portuguese sailors were hunting for an eastern route to India. Name the cape on the southern coast of Africa. When this cape was reached the King of Portugal named it Good Hope, because he believed that the route to India had been found. What other water route is there from Europe to India? Which is the shorter?

What large island is east of Africa? How is it separated from the mainland? Name three groups of islands west of Africa. The Canary Islands are the home of the canary birds. Cape Verde, after which the islands west of it are called, owes its name to the dense vegetation that covers it; for *Verde* means "green." All the islands off the west coast are volcanic.

A gorge in the Atlas Mountains.

74. Relief and Drainage.

Trace on the map the divide between the Indian and the Atlantic slopes of Africa. On which side of the divide is the longer slope? What four great rivers drain the longer slope? To what ocean? What river on the shorter slope of Africa? To what ocean does it flow?

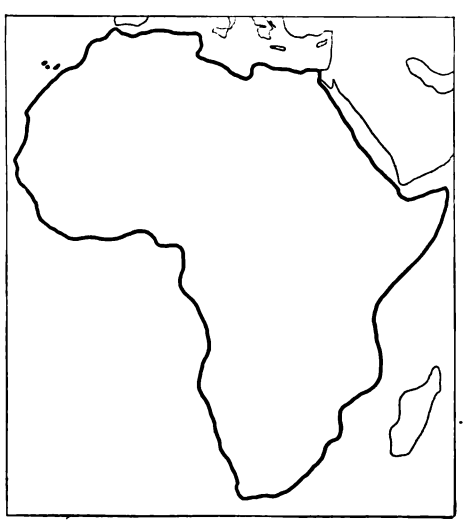
Africa is a great plateau, highest in the southern and eastern parts. There is a rim of mountain ranges around the border, and from these the surface slopes steeply down to a narrow fringe of low coast plains.

Where are the Atlas Mountains? Many years ago people believed that a giant named Atlas lived in northwestern Africa and held up the sky on his shoulders. These mountains are so high that the clouds sometimes seem to rest on their summits. In the southern part of Africa there are several short ranges. What is the name of the chief range? Where is the highland of Abyssinia? This is a lofty plateau with a climate much cooler than that of the surrounding parts of the grand division. The two mountain peaks south of this plateau are the highest in Africa.

Practice making a sketch map of Africa.

POSITION AND COAST LINE.

I. LOCATION. Waters surrounding. Circles crossing.
II. SHAPE. Its length and its breadth. Its three coast lines. Its outline. Islands near.
III. SIZE. Comparison: with Eurasia; with North America.



Second cataract in the Nile.

In the central part of Africa, on each side of the equator, is a broad, fertile belt of land which has a very heavy rainfall. North of the equator this region is called the Sudan. What other continent has a large, well-watered region that is crossed by the equator? In what part of Africa are most of the lakes? What large river system lies within this moist equatorial region? How does it compare with the other rivers of Africa in the number of its branches? What large river in the western Sudan? Into what gulf does it flow?

North of the Sudan the climate is so dry that little vegetation grows over a wide region extending from the Atlantic Ocean to the Red Sea. What is this region called? Its surface is low and level in some places, and rugged and rocky in others. In what direction do the mountains which cross it extend? What large river crosses the Sahara to the Mediterranean Sea? Next to the Mississippi-Missouri, the Nile is the longest river in the world. Where does it rise? In the lower part of its course it has no branch. Why?

Much of southern Africa is also very dry, but it has two large rivers. Where does the Orange River rise? Into what does it flow? What river flows eastward into the Indian Ocean?

Nearly all the large rivers of Africa have rapids or falls where they flow from the plateau to the low coast plains. Steamboats can ascend the Nile to the first cataract, — about eight hundred miles, — but in the Kongo the rapids begin a little over a hundred miles from the sea.

Which grand division has more large lakes than Africa? Name the largest lake of Africa. It is nearly as large as Lake Superior. What great river flows from this lake? Name the lake southwest of Lake Victoria. What great river is its outlet? What lake to the southward empties into the Zambezi? What large lake in the north-central part of Africa?

Practice a sketch map of Africa. Show its chief mountains and rivers.

RELIEF AND DRAINAGE OF AFRICA.

I. SURFACE. General elevation. Mountain border. Coast plains.
II. REGIONS. The Sahara. The Sudan.
III. RIVERS. The Nile. The Kongo. The Niger. The Zambezi.
IV. LAKES. Equatorial. Lake Tchad.

75. People.

Africa has almost twice as many people as North America, and perhaps two thirds of them belong to the black race. The real home of the negro is the region south of the Sahara.

Scene on the Nile.

The black men in America have become civilized by living with the white people, but in Africa most of the negroes are not civilized and are frequently at war. Many of the tribes, however, raise corn and other grain to feed to their herds of cattle, and some of them have learned to make cloth and leather.

An Arab sheik.

Most of the negro tribes live in villages, some of which contain hundreds of low huts. The negroes are fond of dancing and of music which is often harsh and disagreeable to white people. Some tribes are so fond of ornaments, that it is common to see a negro with his nostrils or lips pierced and ornaments fastened in the holes. Many of them grease and paint their bodies, and wear little or no clothing.

The northern coast of Africa is more like the neighboring countries of Europe than like central Africa, from which it is separated by the desert called the Sahara. Its people are mainly Berbers and Arabs; they belong to the white race, but, like the Turks, they believe in the Mohammedan religion. Some of the Berbers are civilized, but many are in a half-savage state. They wander about the country with their herds of cattle and camels, sometimes plundering caravans.

An Arab woman and child.

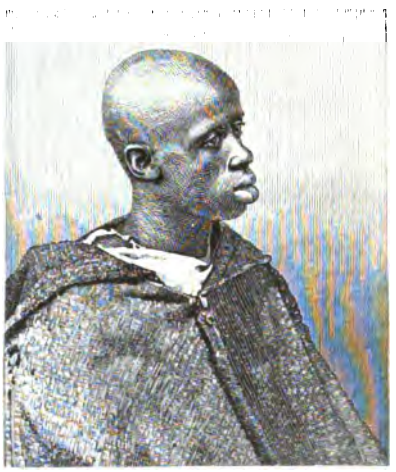
The Berbers once occupied all the country from the Red Sea to the Atlantic Ocean, but about a thousand years ago Arabs came over from southwestern Asia, and their descendants are to-day the traders of northern Africa. The Arabs wear flowing robes and turbans, and are among the finest horsemen in the world. Nearly all the trade between the interior and the coast is by means of Arab caravans.

In southern Africa and along the coast are European colonies.

Sketch Africa, showing where the negroes, Berbers and Arabs, and European colonists live.

PEOPLE OF AFRICA.

I. Inhabitants. Number. Races.
II. Negroes. Home. Appearance. Civilization.
III. Berbers and Arabs.
IV. European Colonists.

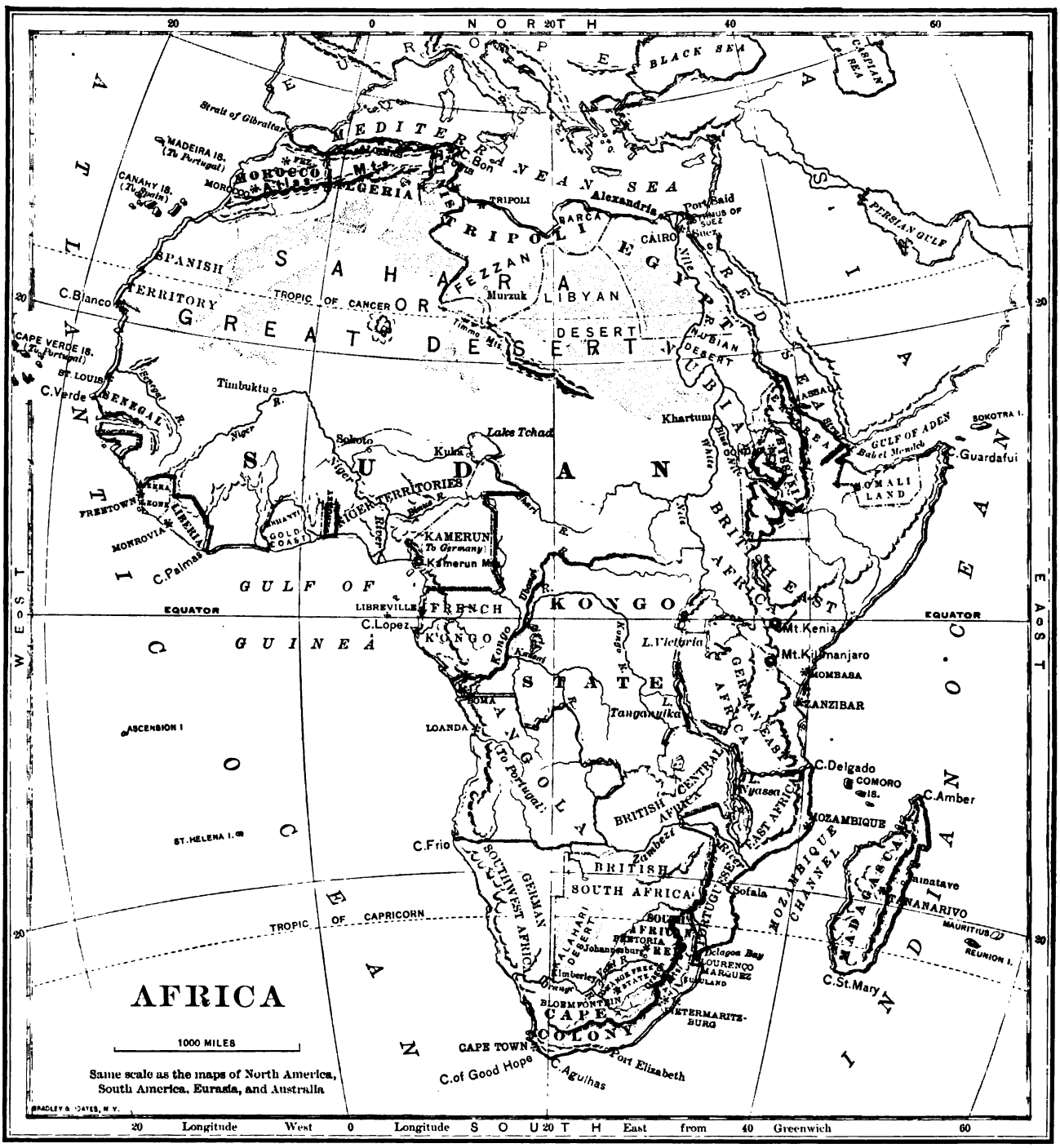


A Sudan slave.

76. Industries.

The industries of the northern coast of Africa, like the people, are similar to those across the Mediterranean Sea. But central Africa is so hot, a part of it is so dry, and its interior is so difficult to reach, that it has only recently been explored by Europeans, and its exports are very different from those of the other grand divisions.

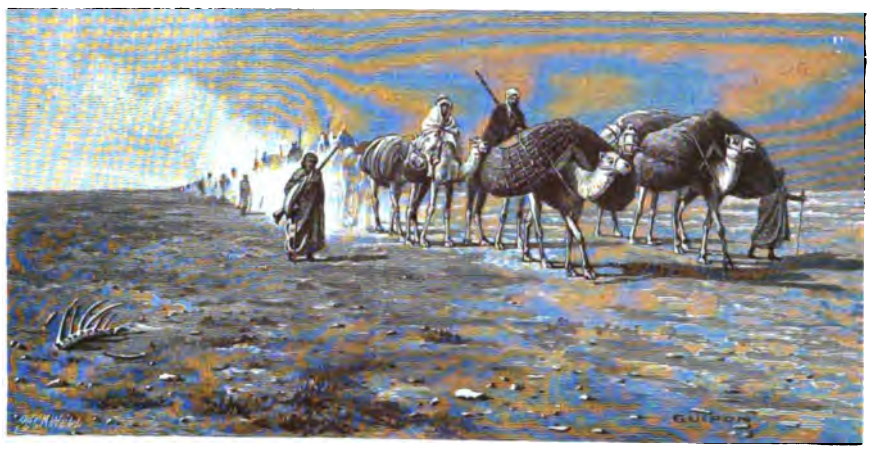
The people from the Mediterranean coast could not easily cross the Great Desert to the south. It is only by means of camels that the Sahara can be traversed. But these animals are constantly crossing the Sahara to the Sudan, carrying salt, cloth, knives, and trinkets. These are traded to the natives of the interior for ivory and slaves mainly, but also for gold



dust and ostrich feathers, which are brought back to the markets near the coast. How are camels fitted to cross deserts?

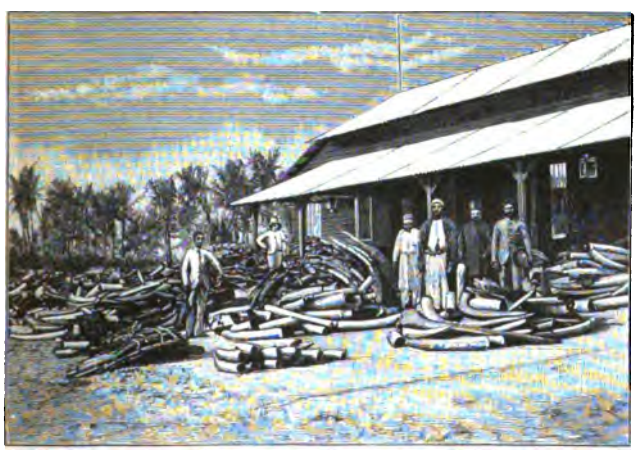
Ivory is the most valuable product of Africa, and great quantities of it are exported every year. From what is it obtained? Elephants are found all over the great central region of Africa, but are being killed so rapidly that in a few years probably none will be left. What part of the elephant furnishes ivory? In what other grand division are elephants found? For what is ivory used?

Slavery exists in most parts of Africa, in many parts of Asia, and in European Turkey. In the rest of Europe and in America it is no longer permitted. Every year thousands of men, women, and children in central Africa are torn from their families, often by the chiefs of their own tribes, and sold into slavery. Many of these slaves are driven across the Sahara, or to the east or west coasts, to be sold.



Caravan on the Sahara.

Few animals live in the Sahara, but one of the most useful is the ostrich, a huge bird that stands about seven feet high. The ostrich does not fly, but it is so swift a runner that a horse can hardly overtake it. Its feathers are used as ornaments. There are many ostrich farms in southern Africa. Great care is given to the raising of young birds, and the plumes are carefully cut each season. These ostrich farms afford most of the world's supply.



An ivory market, Zanzibar.

Gold is found in many parts of Africa, and has had much to do with its settlement. Until gold was found in California most of the coin of Europe was made of gold from the west coast of Africa. There are now rich gold and diamond mines in southern Africa.

Sketch a map of Africa, showing where ivory, gold, and the ostrich are found.

PRODUCTS OF AFRICA.

I. IVORY. What it is. How obtained. How carried. Use.
II. SLAVES. Where captured. Where sold.
III. GOLD AND DIAMONDS. Where found.
IV. OSTRICHES. The wild ostrich. Ostrich farms.

77. Barbary States.

Name the countries along the Mediterranean Sea west of Egypt. They have about the same warmth and rainfall as southern California. They are called the Barbary States, because most of the inhabitants at one time were Berbers.

Which state is opposite Spain? It was named from its people, the Moors, a tribe of the white race closely related to the Jews and Arabs. The people of Morocco are miserably poor and are brutally treated by their emperor or sultan. The capital of the country is any city in which the sultan may happen to live; sometimes it is Fez, the largest city, and

Ostrich.

sometimes Morocco. In these cities the white, flat-roofed houses have no outside windows, but each is built around an open courtyard in the middle. In the sunny streets are seen Arab and Berber soldiers on their fine horses, women with their faces concealed in the folds of their white robes, and donkeys and camels carrying heavy loads and driven by ill-clad Arab and negro boys. Morocco is famous for its beautiful leather.

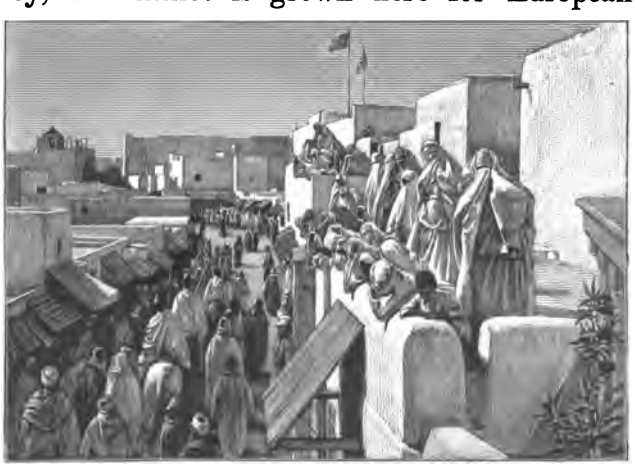
What state is east of Morocco? It is a thriving French colony. Caravans bring goods to the markets along the railways of Algeria. Find Algiers. It is the largest city and seaport.

Grocery store in Tunis.

On how many sides has Tunis a seacoast? Tunis was once a Turkish possession, but it is now a French colony. What is the capital?

Tripoli, including Fezzan and Barca, is a Turkish province and is poorly governed. Most of the land is a desert. What is the capital?

Europeans now control most of the trade and own most of the fertile lands of the Barbary States. A great deal of wheat, barley, and millet is grown here for European markets. Tobacco of fine quality is produced. Olives, dates, and esparto, a kind of grass of which paper is made, are produced and exported.



Street scene in Morocco.

Sketch a map of Africa; show the Barbary States, and locate the cities of Morocco, Algiers, and Tunis.

BARBARY STATES.

I. NAMES AND LOCATIONS.
II. CLIMATE AND PRODUCTIONS.
III. CITIES.
IV. PEOPLE. Natives. Europeans.

78. The Sahara.

The name *Sahara* means "desert." The region itself is a part of the great barren tract that stretches across Africa and most of Asia. Trace this belt on the map of Asia and name the different deserts included in it. These are deserts not so much because the soil is sterile, or sandy, as because so little rain falls that few kinds of plants can grow. In some parts it is so dry that no plants of any kind can live.

Toward the south of the Sahara, where the climate is moister, more or less grass grows, and still farther south the desert region gives place to the fertile lands of the Sudan. In the desert itself there are occasional springs or wells surrounded by grass and date palms. These fertile spots, or *oases*, are the only parts of the Sahara (except the valley of the Nile) where people can live.

This desert is probably the hottest part of the earth, though the nights are cool, and sometimes cold enough to freeze water.

Describe the surface of the Sahara. In some parts it is covered with loose rocks and in

others there are sand dunes that drift about with the wind. Sometimes fierce winds blow and the air is so full of fine sand that it is almost as dark as night. Then the camels and their drivers lie upon the ground with their heads almost buried in the sand until the storm has passed.

Oasis in Tripoli.

Sketch Africa; locate the Sahara, and show its mountain range.

THE SAHARA.

I. LOCATION. In Africa. In the desert belt.
II. SURFACE.
III. WINDS AND SAND STORMS.
IV. VEGETATION.
V. CARAVANS.

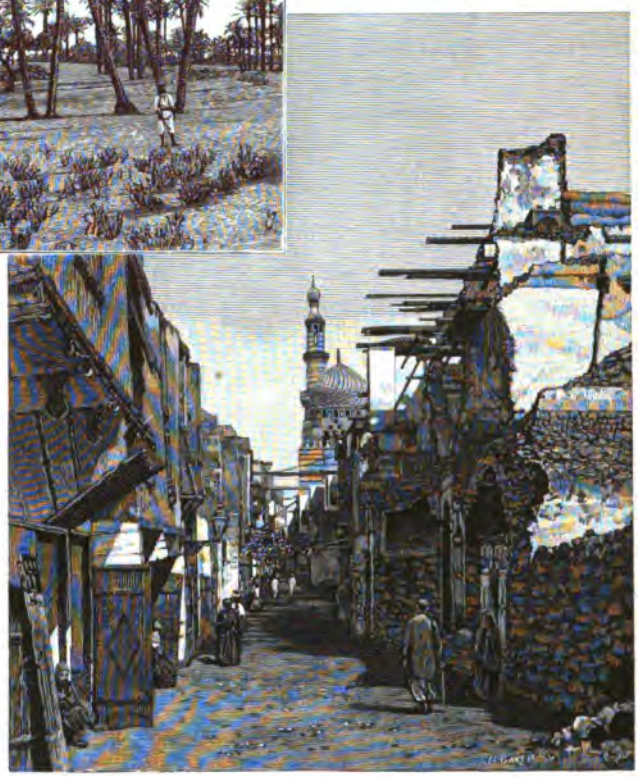
79. Egypt and Abyssinia.

What sea north of Egypt? East? What river flows through the country? How was the Nile delta made? What kind of soil has it? What other rivers do you know of that have deltas?

The country of Egypt is several hundred miles broad, but the only part in which people can live is the flood plain of the Nile, rarely over four or five miles wide. On each side of it is a hot desert.

Except in the delta scarcely a drop of rain ever falls on this flood plain of the Nile. It is well watered, however; for once a year the rains in the southern highlands flood the Nile, which overflows the plain on each side of it. Little by little the water subsides and leaves a coating of mud over the land, which yields wonderful harvests of cotton, sugar, rice, and wheat. Perhaps no other country produces such fine dates, melons, and figs. These fertile lowlands of the Nile are very densely populated.

The Egyptians are a mixed race. Most of them are of mixed Arab and negro blood, and are Mohammedans. The Arabic language prevails.



Street scene in Old Cairo.

Egypt is called a Turkish possession, for the *khedive* or ruler pays tribute to Turkey. But the real rulers of Egypt are the British, who control the Suez Canal.

The Egyptians were civilized long before even the Greeks. They built in the Nile valley many vast temples, monuments, and tombs, the huge ruins of which still stand. One of these old monuments or *obelisks*, which stood in Egypt in the time of Moses, has been brought to New York city and placed in Central Park.

Find Cairo. It is the capital of Egypt. Near it are the pyramids. (See picture, p. 15.) They were built many thousand years ago as tombs for the kings. Find Alexandria, the chief seaport. Where are Suez and Port Said?

Where is the Nubian Desert? Nubia and much of the country south of it are claimed by Egypt. In this part of the Nile are found the crocodile and the hippopotamus, which is something like a hog, but much larger.

Hippopotamus.

Many of the people of Abyssinia are Christians. They are thrifty farmers and herders. There are also many Arab slave traders in the country. It is thought that coffee came first from the Abyssinian plateau.

Sketch Africa; show Egypt, the Nile, and the lakes near its source.

EGYPT.

I. LOCATION.
II. THE NILE BASIN. Shape and position. The river: length; delta; source of water; floods. Soil and productions.
III. PEOPLE. Government. Ancient civilization.

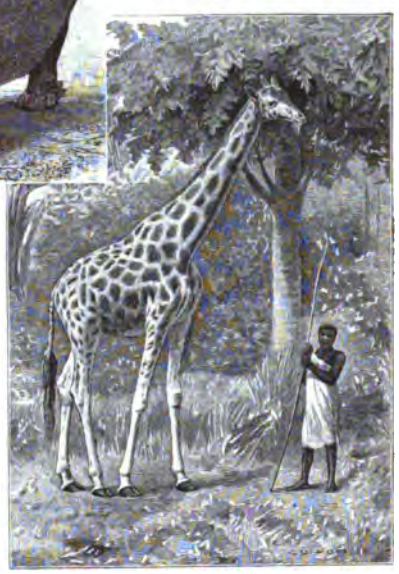
80. The Sudan and the Kongo State.

South of the Sahara, stretching across the continent from Cape Verde to the Abyssinian highland, is a broad belt of fertile land called the Sudan. It is a part of the well-watered region of equatorial Africa, and is composed partly of open lands and partly of forests.

There is no boundary between the Sahara and the Sudan, but the desert gradually disappears as the rainfall increases. In the Sudan are found the giraffe, the elephant, and also the lion, which is common to most parts of Africa. Name the rivers in the Sudan; the lake. How does the Sudan compare with the Sahara in size?

The name *Sudan* means "black." It is in this part of Africa that the most civilized negro tribes live. They cultivate cotton and grain, own herds of cattle, and manufacture cotton cloth and leather goods. Each great tribe has its king. Most of the people of the Sudan are Mohammedans.

There are a few large native towns in the Sudan, with bazaars or markets, where the Arab merchants gather the products of the Sudan to carry them to the seaports.

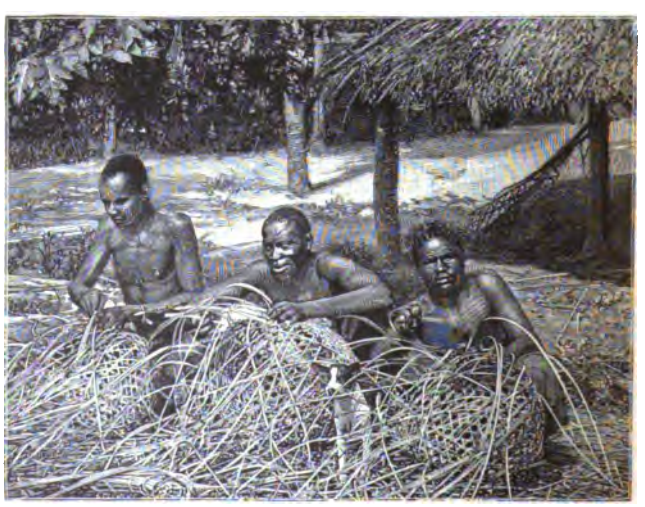


Giraffe.

What state occupies most of the Kongo basin? This region is covered with dense forests, and is the home of many millions of people.

What large animal found in much of this region is hunted and killed? Ivory and rubber are valuable exports. In what respects is the Kongo basin like the rubber-producing region of South America? The rubber trees of the two regions are not of the same kind.

Though the Kongo basin has a climate unsuited to Europeans, there are traders in this region from France, Belgium, and Portugal.



Making baskets in central Africa.

Steamers sail on the rivers, but much merchandise is carried by the natives over the narrow trails which everywhere cover the interior of Africa. The Kongo State is controlled by the King of the Belgians. Its trade is chiefly with Belgium and the Netherlands.

What is the capital of the Kongo State?

Carrying hides to the coast, Madagascar.

Sketch Africa; locate the Sudan, the Kongo River, the Kongo State, and Boma.

THE SUDAN AND THE KONGO STATE.

I. Location.
II. The Kongo River.
III. Climate and Rainfall.
IV. Forests and Animals.
V. People. Natives. Europeans.
VI. Trade.

81. Coast Countries.

Various European nations have established colonies among the negro tribes of the west coast of Africa. Where are Sierra Leone and Liberia? One was established by Great Britain, and the other by the United States, for freed slaves. Liberia is now an independent republic.

The west coast of Africa is rich in gold, and yields harvests of coffee, cotton, and sugar cane. One of the chief products of the coast region is an oil pressed from the nut of a palm tree. Palm oil is used in Europe and in the United States for making soap. The forests yield kola nuts, india rubber, and copal, from which the best varnish is made. All these products are sold in Europe and America.

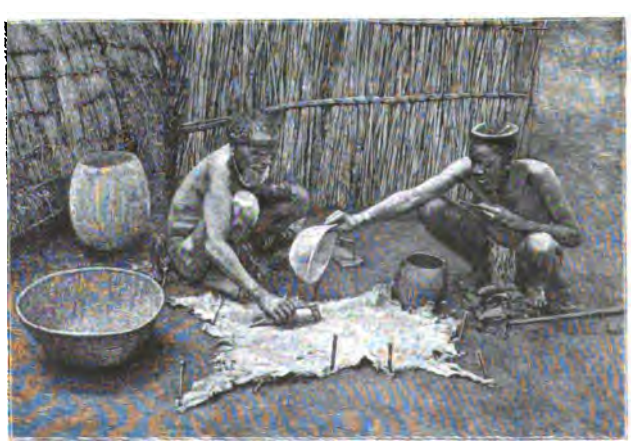
The east coast also is divided among European countries. The chief products are ivory, rubber, and sesame seeds, from which a valuable oil is pressed. The Arabs are still secretly engaged in the slave trade. Zanzibar, controlled by Great Britain, is one of the most important places on the east coast.

The island of Madagascar is now a French colony. The former ruling class belongs to the Malay race, and is partly civilized. There are many negroes held as slaves. Gold and copper are mined, but farming and cattle raising are the chief employments. Rice, sugar cane, coffee, and cotton are cultivated. Rubber and hides are the chief exports. The greater part of the trade is with France. Tananarivo is the capital. What is the chief seaport?

82. Cape Colony and the Boer States.

The region from the Cape of Good Hope to the Orange River is known as Cape Colony. What is its capital? The first owners of Cape Town were the Dutch, who settled there not long after New York was founded. But just as the English took New York, so they afterwards captured Cape Colony, which is now the most prosperous country in Africa.

The Dutch and the English did not live very peaceably together; so the Dutch settlers, or

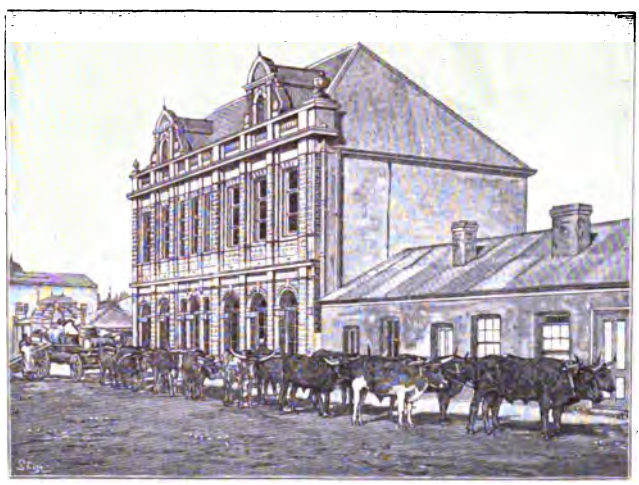


Natives tanning hides, Natal.

Boers, sold their lands, and, moving north across the Orange and the Vaal rivers, formed new states — the Orange Free State and the South African Republic. The Boers are an honest, thrifty, and religious people.

Many of the black people of south Africa are becoming civilized. They tend the herds, and work in the gold and the diamond mines.

Mining, farming, and herding are the chief pursuits, and wool, grain, and hides are exported. There are also extensive ostrich farms.



Scene in Johannesburg.

Where is Kimberley? More diamonds come from the mines near Kimberley than from all the rest of the world. The rich gold mines in these states are worked mainly by Englishmen and Americans. Johannesburg is the center of the mining region.

Railways have been built through much of this region to the seaports. Cape Town is the principal seaport of southern Africa.

Sketch Africa; locate Cape Colony, the South African Republic, and the Orange Free State.

SOUTH AFRICA.

I. COUNTRIES.
II. HISTORY.
III. MINES.

CORRELATIONS AND COMPARISONS.

Location. — Where does the equator cross Africa? What other grand division does it cross?

Surface. — Which grand division is a great plateau? Which is higher, its northern or its southern part? Its eastern or its western part? What cape near its southern extremity? What plateau between the Cape of Good Hope and the Red Sea? What mountains? Does the highland region which extends from the Cape of Good Hope to the Red Sea include the highest part of Africa?

Rivers. — Name the three largest rivers in Africa. Into the waters of what ocean do they flow? Beginning at the south, draw a line separating the part of Africa drained into the Indian Ocean from the part drained into the Atlantic Ocean and its seas. What rivers of Africa rise in the equatorial regions?

Forests. — Where is the forest region of Africa? What other grand division has a vast equatorial forest region? Mention one way in which equatorial forests differ from those of temperate zones. Name some animals of the African forests. Of the South American forests.

People. — To what race do most of the people of Africa belong? What part of Africa is the home of the black race? In what other grand divisions are many negroes found? In which grand divisions are negroes still in slavery? What part of Africa was the seat of an early civilization? To what race do the inhabitants of northern Africa belong? What natural barrier separates northern Africa from the land of the black man? What race is now colonizing the negroes' country?

Ivory and Ostrich Feathers. — What animals of Africa yield valuable products? Where is the ostrich found in its wild state? What are ostrich farms? Where is Cape Colony? In what parts of Africa is the elephant found? Where is the Kongo State? What and where is Boma? How is ivory obtained? Why is the supply of ivory decreasing? How is it carried to the markets? What is a caravan? Where does Asiatic ivory come from? Where are the Barbary States? Which are European colonies?

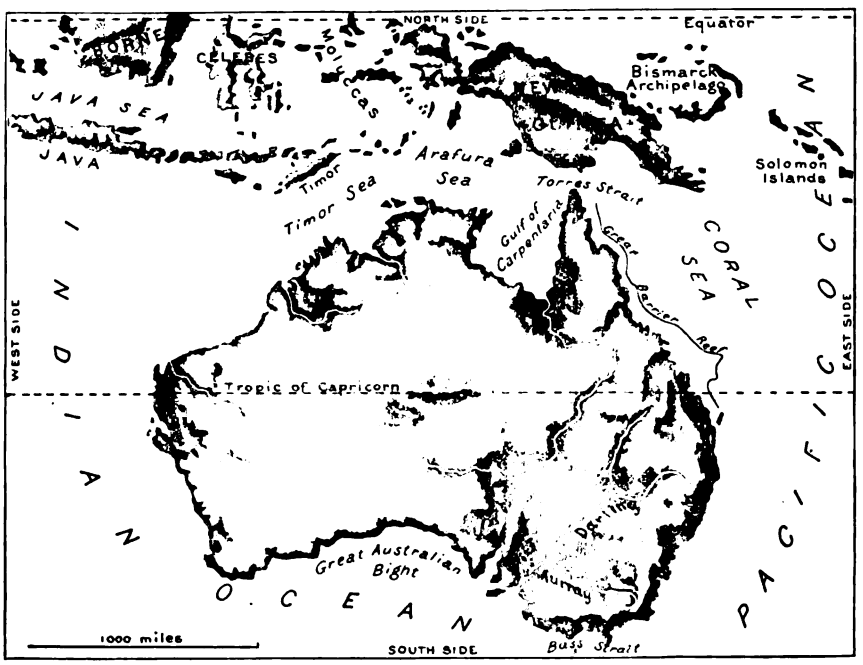
Gold and Diamonds. — In what countries of Africa is gold found? What are the coast countries? Where are the Boer States? Name them. Who are the Boers? Where is Johannesburg? Where are the Kimberley diamond mines? To what nation does Cape Colony belong? What is the chief seaport? To what city are diamonds sent to be cut?

Egypt. — Where is Egypt? What river drains it? How can the Nile valley support so dense a population? What are the leading products of the Nile basin? Where is Cairo? Alexandria? What attracts travelers to Egypt? What nation rules Egypt?

AUSTRALIA AND THE ISLANDS OF THE PACIFIC.

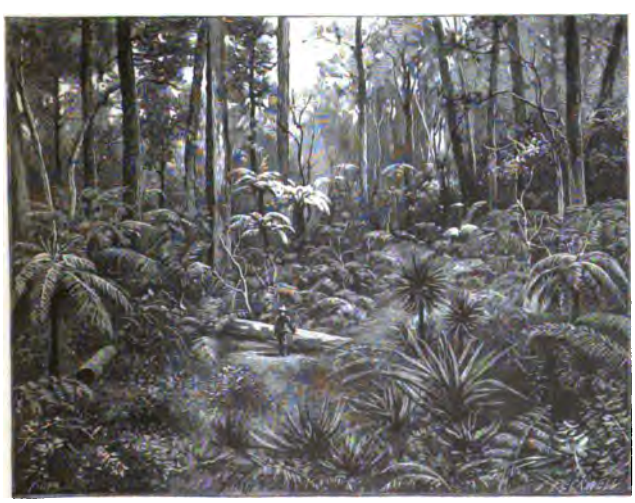
83. Australia.

In what direction from Asia is Australia? (See map, p. 137.) Is it an island or a continent? It is also spoken of as a grand division. What tropic crosses it? What other grand divisions are crossed by the same tropic? In what zones is Australia? What are the winter months in southern Australia? Name the waters which surround Australia. Name the large islands near it. In what part of Australia are the highlands? In what part are the longest rivers? Practice drawing an outline map of Australia.



AUSTRALIA. (Same scale as maps of North America, South America, Eurasia, and Africa.)

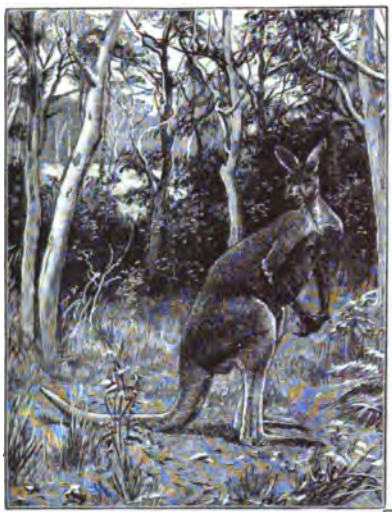
In 1783 England acknowledged the independence of the United States, and thus lost her chief western colony. Five years later, the English, finding their prisons over full, sent a shipload of convicts, with soldiers to guard them, to the distant island of Australia, and thus founded England's chief eastern colony.



Australian forest.

The surface of most of Australia is a low, dry plateau, with a range of mountains along the east coast. In the southeast the mountains are separated from the interior plateau by broad lowlands. Most of the rivers are sudden torrents which soon dry up, or sink into the sandy soil. The lakes are salt marshes or shallow pools.

Over the dry interior region, strange shrubs and spiny grasses form a thicket so tangled and bristling that only a few wild animals can crawl through it. Even on the mountain slopes and in the coast regions, where there is greater rainfall, the plants are not like those in the rest of the world. There are forests of eucalyptus, one of the tallest trees in the world, with long, pointed, dark-green leaves, turned edgewise to the sun.



Kangaroo.

The animals are even stranger than the plants. Many of the native birds are like those of Asia, but most of the four-footed animals are *pouched*. There is a sac on the breast of the mother, in which the young are carried for some time after birth. The largest of these pouched animals is the kangaroo, which has very powerful hind legs on which it travels swiftly by jumping, without touching its weak fore legs to the ground. Much kangaroo leather is sold in the United States.

The natives are black savages, very degraded and ignorant. Few of them now remain.

Native Australians.

After some years the English stopped sending convicts to Australia; other colonists came, sheep farms were started, and sheep raising has made the greatest wealth of the continent. By and by gold was discovered. The gold mines are among the richest in the world, but the chief occupation of Australia is the production of wool.

Over one fourth of the world's wool product is grown in Australia, and great quantities are exported, chiefly to England. Tallow, hides, leather, preserved and fresh meats are also exported, as well as wheat and flour, gold and tin. In exchange for these, manufactured articles are sent from the mother country. What city is the chief wool market of the United States?

Australia is divided into five colonies, each of which makes its own laws, but all belong to the British Empire.

What is the name of the most southern colony? It is one of the richest gold-producing regions in the world. Its capital is about as large as Baltimore.

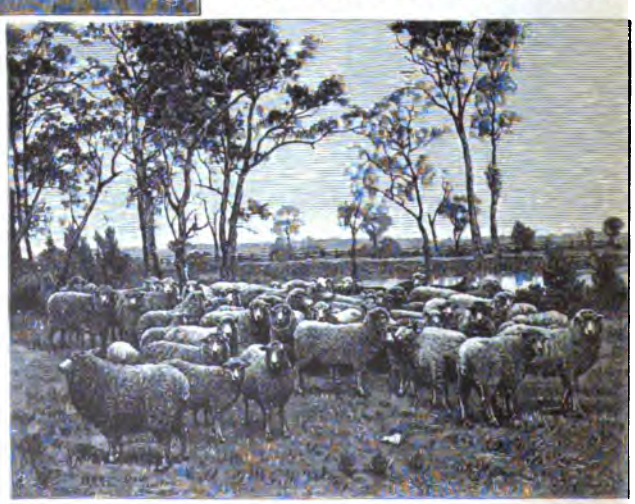
What colony north of Victoria? New South Wales is the richest and most populous colony of Australia. Its capital is a port for steamships from San Francisco and Vancouver.

What colony north of New South Wales? Tin is mined in Queensland. Name the capital.

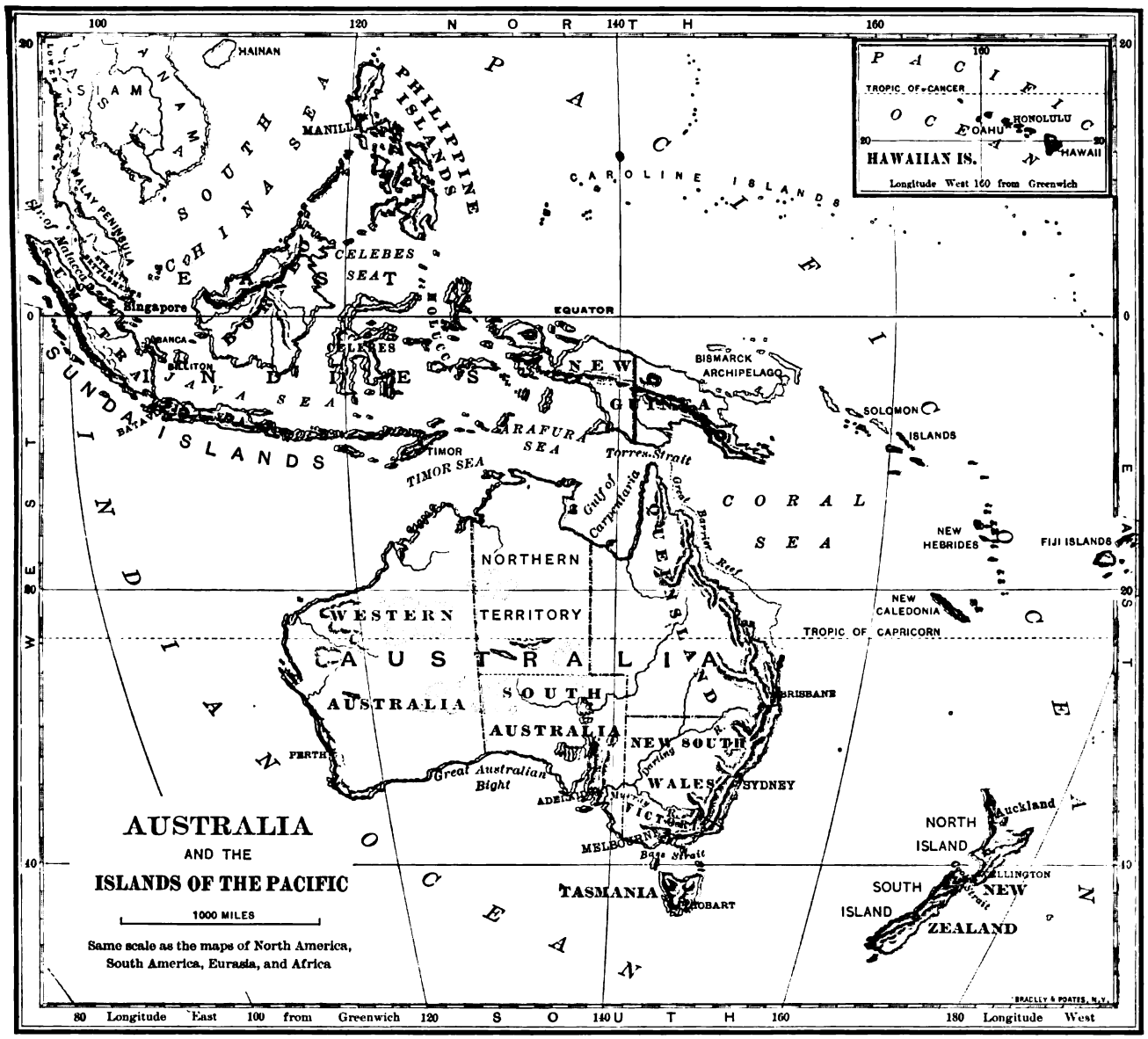
In South Australia only a few square miles along the coast are productive, but this colony yields considerable wheat.

What is the capital and chief seaport of South Australia? Of Western Australia?

Railways have been built from the larger cities of Australia to the ranches and mines



Australian sheep.



in the interior, and the Australian colonists are among the foremost people of the world in their modes of government and education.

Though Australia is nearly as large as the United States, it contains but half as many inhabitants as the state of New York.

84. Islands of the Pacific.

What group of islands is southeast of Australia? What island is south? What large island is north? What is the name of the sea east of Queensland? What coral formation lies in this sea? (See p. 70.)

The large islands near Australia are rugged plateaus with high mountain ranges. Some of the small islands shown on the map are the tops of volcanoes which are partly covered by the sea; others are low coral islands.

New Zealand is a volcanic region, containing geysers like those of Yellowstone National Park. The two large islands are about twice as large as the state of New York. Sheep raising is

Native huts, New Zealand.

the chief industry, and wool and meat are exported. New Zealand is a British colony, and most of the people are of English descent. The natives, called Maoris, belong to the Malay race. What is the capital? Where is Auckland? Steamships from San Francisco call at this port. Lines of railway have been built through the islands.

Tasmania is a plateau with very fertile valleys. It is a British colony, and for a long time convicts were sent there as well as to Australia. The chief exports are wool and tin. What is the capital?

The Fiji Islands, north of New Zealand, also form a British colony. The natives are Malays, and have been so far civilized that they now work on the plantations, from which sugar, fruit, and cocoanuts are sent to New Zealand and Australia.

New Guinea is owned by the Dutch, the British, and the Germans; but very few white people live there, and the natives are mostly savage.

The Hawaiian Islands are a group of small islands in the Pacific Ocean, near the Tropic of Cancer, and about two thirds of the distance from Sydney to San Francisco. They form a republic. People from the United States own the greater part of the land, but most of the inhabitants are Japanese, Chinese, Portuguese, and natives. Most of the sugar used on the Pacific coast of our country is made from cane grown in the Hawaiian Islands. Honolulu is the capital and largest city.

Going for water, New Guinea.

Scene in Honolulu, Hawaiian Islands.

New Guinea canoe, with sail made of bark.

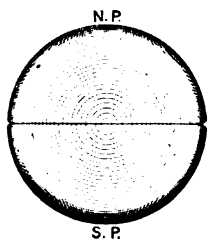
AUSTRALIA AND ISLANDS OF THE PACIFIC.

I. History of Australia. Founding. Settlement. Government. Colonies. Cities. Trade relations.

II. Description of Australia. Surroundings. Surface. Vegetation: native; cultivated. Animals. People.

III. Islands of the Pacific. New Zealand. Tasmania. Fiji Islands. New Guinea. Hawaiian Islands.

85. Latitude and Longitude.



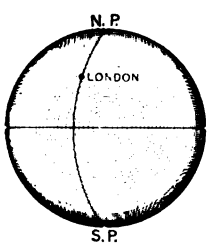
Take a large apple, or make a sphere out of clay to represent the earth. Scratch a line for the equator, and mark the north and the south poles.

In passing from the equator to the north pole, what part of the distance round the earth do you travel? For convenience in telling how far any place is from the equator, the distance from the equator to either pole is divided into ninety parts, called *degrees of latitude.* How many degrees is it, then, from the north pole to the south pole? What point would you reach if you were to travel 90° (ninety degrees) north from the equator? Minneapolis is 45° north of the equator. How many degrees is it south of the north pole? The Isthmus of Suez is one third of the way from the equator to the north pole. How many degrees north is it?

The mouth of the Mississippi is 30° north latitude. Put a dot on your sphere to show where the mouth of the Mississippi is.

London is 51° north latitude; scratch a spot on your sphere to represent it.

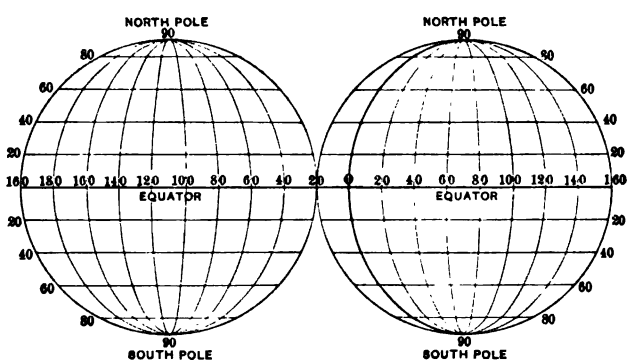
Scratch a line from the north pole to the south pole through this dot. A north and south line from the north pole to the south pole on a globe or map is called a *meridian.*



In a part of London called Greenwich there is a fine *observatory,* where astronomers observe the stars. The meridian passing through the Greenwich observatory is called the *prime meridian,* from which distances east and west are measured.

How many degrees are there between the equator and the north pole? How far around the world is that? How many degrees, then, would you pass if you traveled all the way around the world to your starting point? The distance east or west from the prime meridian is also measured in degrees, called degrees of *longitude.* If you traveled east or west from the prime meridian all the way around the world to the prime meridian again, you would have passed 360° of longitude.

How many degrees would you pass in going halfway around the world? Suppose John starts from the meridian of Greenwich and travels west, and Charles travels east from the same point and just as fast as John goes west, how many degrees of west longitude will John have passed over when the two boys meet? How many degrees of east longitude will Charles have passed over? The line on this map marked 180° is how far around the world from the meridian of Greenwich?



The mouth of the Mississippi is 30° north latitude, and 90° west longitude. Now scratch a place on your sphere about where it is.

In order to tell how far north or south a place is, small circles, parallel to the equator, and hence called *parallels,* are drawn on maps. The parallels shown on the maps above are 20° apart. In order to tell how far east or west from the meridian of Greenwich any place is, meridians are usually drawn on maps. The meridians on these maps are 20° apart.

Cape Horn is 56° south. It is also 67° west. Put a dot where it belongs. Singapore is 2° north and 104° east. Put a dot where it belongs.

CORRELATIONS AND COMPARISONS.

How does the land surface of the globe compare in extent with the water surface? About which pole is the larger ocean? Which oceans extend from one polar region to the other? Which ocean is really a great bay? Compare the Atlantic and Pacific oceans in number of tributary rivers, and in steepness and irregularity of coasts. Compare them in civilizations on their coasts, and in number of seaports.

Compare the northern and southern hemispheres as to land and water. Name the grand divisions in the order of their size.

Locations. — What grand divisions lie wholly in the northern hemisphere? What grand divisions are crossed by the equator? By the Tropic of Cancer? By the Tropic of Capricorn? By the polar circles?

Outlines. — Which grand division has the most regular outline? The most irregular outline? Name the peninsulas of Eurasia. Of North America. What is the largest sea nearly inclosed by a continent? How is it connected with the oceans?

Highlands. — What highland is between the Cape of Good Hope and the Red Sea? What plateaus between the Red Sea and Bering Strait? What mountains? What part of the highland of Eurasia is included in the line of highlands which extends from the Red Sea to Bering Strait? What line of highlands extends from Bering Strait to Cape Horn? What plateaus does it include? What mountains? Beginning at Cape Horn, name in order the plateaus and mountain ranges of the great highland regions which extend from this cape to the Cape of Good Hope. Beginning with South America, name the mountains of the world which are not included in the preceding list.

Rivers. — Into what ocean does the long slope of Africa drain? Of Eurasia? Of North America? Of South America? Beginning at Cape Horn, name in order all the large rivers of the world which empty into the Atlantic or Arctic Ocean. Name in the same order the great plains drained by these rivers.

Beginning at Cape Horn, name in order the large rivers of the world which empty into the Pacific or Indian Ocean. How does the Pacific and Indian Ocean slope compare in length with the Atlantic and Arctic Ocean slope in each grand division? Which slope has more large rivers? More alluvial plains?

Plains. — Where are the grassy plains of Eurasia? Where are the grassy plains of America? Of Africa? What are they called in North America? In South America? In Eurasia? What animals are found in the Sudan? What animals are found on the llanos? On the pampas? In Australia?

People. — Make a list of cities found in the highland regions of the world. In the lowland regions. Which list is the longer? Why? Which grand division has the most people? Which one is second in population? Which is last? Which race went to Australia from Europe? What races live in Africa? Which went there? From what grand division? What races live in Eurasia? In what parts does each mostly live? What races live in America? Which came here? From what grand division? What race has spread over the whole world as conquerors? What race was spread over the Western Continent to serve as slaves?

Rainfall. — In what zone does most rain fall? In what part of the zone is the rainfall heaviest? What large rivers of the world have most of their basins in equatorial regions? Where are the rainless regions of Africa? Of Eurasia? Of America?

Natural Products. — Make on the board a list of the chief food plants which you have learned about. Put after each the names of the regions where it grows. Find out whether these regions are alike in climate. In surface. Tell how each of these regions can find a way to export its products. Make a list of the regions of the world where animals graze. Find out whether these regions are alike in climate. In surface. Tell how they export their products. Make a list of the chief minerals which you have learned about. Put opposite each the grand division where it is found.

Manufactures. — What have you learned are the two great manufacturing grand divisions? What minerals are found in those grand divisions? Which grand divisions carry on the most trade? Why?

Latitude and Longitude. — Through what European countries does the meridian of Greenwich pass? Through what countries of Africa? Through what northern sea does the 180th meridian pass? Near what southern islands? What meridian passes through eastern Nova Scotia? Through what countries of South America does it pass? What country of South America is directly south of the Isthmus of Panama? What states of North America are north of the Isthmus of Panama?

Are the Japan Islands or the British Isles farther north? What country of North America is in the same latitude as the British Isles? Compare the climate of the two countries. What countries of Europe are in about the same latitude as New York? Compare their climate with that of New York. Which is colder — Cape Horn or Cape of Good Hope? Why? Compare the West Indies with the Sahara in latitude; in climate. Explain the difference.

SIZE AND POPULATION.

SUMMARY.

Length of the earth's axis (miles)		7,900
Length of the equator (miles)		24,900
The earth's surface (sq. miles)		**196,900,000**
Pacific Ocean	" "	71,000,000
Atlantic Ocean	" "	34,000,000
Indian Ocean	" "	28,000,000
Antarctic Ocean	" "	7,500,000
Arctic Ocean	" "	4,000,000
The sea	" "	**144,500,000**

	Area in Sq. Miles.	Population.
Asia	16,956,000	823,155,000
Africa	11,515,000	168,497,000
North America	9,350,000	88,003,000
South America	6,888,000	33,566,000
Europe	3,942,000	360,581,000
Australia, etc.	3,710,000	5,684,000
The land	**52,361,000**	**1,479,486,000**

ASIA.

Russia in Asia	6,593,000	15,907,000
Chinese Empire	4,279,000	358,571,000
Japanese Empire	161,000	43,072,000
Korea	84,000	10,519,000
British India, etc.	1,810,000	294,998,000
Other British possessions	47,000	1,692,000
Siam	220,000	9,000,000
French Indo-China	278,000	19,197,000
Baluchistan	167,000	1,020,000
Afghanistan	240,000	4,600,000
Persia	635,000	7,500,000
Turkey in Asia	709,000	15,479,000
Arabia	959,000	2,142,000
East Indies	774,000	39,458,000
Total	16,956,000	823,155,000

AFRICA.

Morocco	314,000	8,016,000
Algeria	258,000	3,855,000
Tunis	45,000	1,500,000
Tripoli	399,000	1,000,000
Egypt	361,000	6,818,000
Abyssinia	196,000	4,500,000
Sahara	2,386,000	2,500,000
Sudan	2,969,000	87,164,000
Somali Land, etc.	813,000	13,092,000
Kongo State	865,000	14,100,000
Portuguese South Africa	827,000	13,200,000
German S. Africa	691,000	3,100,000
South African Republic	114,000	679,000
Orange Free State	50,000	208,000
British S. Africa	989,000	4,221,000
African islands	238,000	4,544,000
Total	11,515,000	168,497,000

NORTH AMERICA.

	Area in Sq. Miles.	Population.
Greenland and Iceland	878,000	79,000
British America	3,778,000	5,034,000
United States	3,668,000	62,980,000
Mexico	752,000	11,396,000
Central America	180,000	3,010,000
West Indies	94,000	5,504,000
Total	9,350,000	88,003,000

SOUTH AMERICA.

Colombia	464,000	3,321,000
Venezuela	403,000	2,239,000
Guiana, British	89,000	282,000
Guiana, Dutch	50,000	66,000
Guiana, French	30,000	26,000
Brazil	3,228,000	14,600,000
Ecuador	116,000	1,204,000
Peru	439,000	2,980,000
Bolivia	515,000	1,435,000
Chile	300,000	3,165,000
Argentina	1,077,000	3,204,000
Paraguay	98,000	330,000
Uruguay	69,000	712,000
Islands	10,000	2,000
Total	6,888,000	33,566,000

EUROPE.

British possessions	122,000	38,087,000
France	207,000	38,238,000
Spain	192,000	17,247,000
Portugal	36,000	4,710,000
Belgium	11,000	6,094,000
Netherlands	13,000	4,558,000
Denmark	15,000	2,185,000
German Empire	211,000	49,635,000
Switzerland (inc. lakes)	16,000	2,933,000
Austria-Hungary	261,000	42,631,000
Italy	111,000	30,166,000
Norway and Sweden	299,500	6,774,000
Russia in Europe	2,198,000	98,841,000
Turkey in Europe	105,000	8,907,000
Roumania	51,000	5,000,000
Servia	19,000	2,158,000
Montenegro	3,500	200,000
Greece and islands	25,000	2,217,000
Spitzbergen, etc.	46,000	
Total	3,942,000	360,581,000

AUSTRALIA, ETC.

Australia	2,945,000	3,073,000
Tasmania	26,000	156,500
New Zealand	105,000	673,500
New Guinea, etc.	312,000	837,000
Hawaiian Islands	7,000	92,000
Other islands	61,000	852,000
South Polar Region	254,000	
Total	3,710,000	5,684,000

UNITED STATES.

	Area in Sq. Miles.	Population.
Alabama	52,250	1,513,017
Arkansas	53,850	1,128,179
California	158,360	1,208,130
Colorado	103,925	412,198
Connecticut	4,990	746,258
Delaware	2,050	168,493
Florida	58,680	391,422
Georgia	59,475	1,837,353
Idaho	84,800	84,385
Illinois	56,650	3,826,351
Indiana	36,350	2,192,404
Iowa	56,025	1,911,896
Kansas	82,080	1,427,096
Kentucky	40,400	1,858,635
Louisiana	48,720	1,118,587
Maine	33,040	661,086
Maryland	12,210	1,042,390
Massachusetts	8,315	2,238,943
Michigan	58,915	2,093,889
Minnesota	83,365	1,301,826
Mississippi	46,810	1,289,600
Missouri	69,415	2,679,184
Montana	146,080	132,159
Nebraska	77,510	1,058,910
Nevada	110,700	45,761
New Hampshire	9,305	376,530
New Jersey	7,815	1,444,933
New York	49,170	5,997,853
North Carolina	52,250	1,617,947
North Dakota	70,795	182,719
Ohio	41,060	3,672,316
Oregon	96,030	313,767
Pennsylvania	45,215	5,258,014
Rhode Island	1,250	345,506
South Carolina	30,570	1,151,149
South Dakota	77,650	328,808
Tennessee	42,050	1,767,518
Texas	265,780	2,235,523
Utah	84,970	207,905
Vermont	9,565	332,422
Virginia	42,450	1,655,980
Washington	69,180	349,390
West Virginia	24,780	762,794
Wisconsin	56,040	1,686,880
Wyoming	97,890	60,705
Delaware, Raritan, and N.Y. bays	720	
Total States	2,719,500	62,116,811
Alaska	577,390	32,052
Arizona	113,020	59,620
District of Columbia	70	230,392
Indian Territory Indians, 50,616 all others, 128,705	31,400	179,321
Indians in States and other Territories		146,143
New Mexico	122,580	153,593
Oklahoma	39,030	61,834
Total Territories	883,490	862,955
Portion of Great Lakes belonging to U.S.	65,177	
Total	3,668,167	62,979,766

MOUNTAINS AND PLATEAUS.

	Av. Elev. Feet.
Mount Everest	29,000
Himalaya Mountains	19,000
Andes Mountains	13,000
Caucasus Mountains	10,000
Rocky Mountains	10,000
Atlas Mountains	9,000
Alps Mountains	8,500
East Australian Mountains	5,000
Appalachian Mountains	2,500
Plateau of Tibet	13,500
Plateau of Bolivia	12,500
Rocky Mountain highland—	
in the United States	5,000
in Mexico	7,500
Abyssinian highland	6,500
Plateau of Iran	5,000
Desert of Gobi	3,500
Plateau of Guiana	2,000
Brazilian plateau	2,000

RIVERS AND THEIR BASINS.

	Area of Basin in Sq. Miles.	Length, Miles.
Amazon, S. America	2,320,000	3,415
Amur, Asia	787,000	2,700
Arkansas, U.S.	186,000	2,000
Colorado, U.S.	225,000	1,000
Columbia, N. America	338,000	1,383
Danube, Europe	315,000	1,800
Dnieper, Russia	202,000	1,334
Don, Russia	166,000	1,153
Euphrates, Asia	260,000	1,600
Ganges, India	397,000	1,455
Hoang, Chin. Empire	387,000	2,300
Hudson, U.S.	13,000	300
Indus, Asia	360,000	1,900
Kongo, Africa	1,202,000	2,800
La Plata, S. America	1,250,000	2,500
Lena, Siberia	909,000	2,860
Loire, France	47,000	543
Mackenzie, Canada	442,000	2,120
Mekong, Asia	350,000	2,600
Miss'ippi-Missouri, U.S.	1,240,000	4,194
Mississippi proper	1,240,000	2,616
Missouri	527,000	2,908
Niger, Africa	780,000	2,600
Nile, Africa	1,620,000	3,670
Ob, Asia	1,151,000	3,235
Ohio, U.S.	202,000	1,265
Orange, Africa	446,000	1,152
Orinoco, S. America	370,000	1,500
Rhine, Europe	87,000	810
Rio Grande, N. America	180,000	1,800
St. Lawrence, N. America	297,000	2,120
São Francisco, Brazil	248,000	1,800
Saskatchewan, Canada	132,000	1,660
Volga, Russia	563,000	2,325
Yangtze, Chin. Empire	725,000	3,300
Yenisei, Asia	792,000	2,500
Yukon, N. America	206,000	2,050
Zambezi, Africa	550,000	1,600

POPULATION OF IMPORTANT CITIES.

CITIES IN THE UNITED STATES.

	U. S. Census, 1890.	Latest Census.
Albany, N.Y.	94,923	97,120 ('92)
Allegheny, Pa.	105,287	
Atlanta, Ga.	65,533	
Augusta, Ga.	33,300	
Baltimore, Md.	434,439	
Birmingham, Ala.	26,178	
Boston, Mass.	448,477	496,920 ('95)
Brooklyn, N.Y.	806,343	957,163 ('92)
Buffalo, N.Y.	255,664	278,796 ('92)
Cambridge, Mass.	70,028	81,643 ('95)
Charleston, S.C.	54,955	
Chattanooga, Tenn.	29,100	
Chicago, Ill.	1,099,850	
Cincinnati, O.	296,908	
Cleveland, O.	261,353	
Columbia, S.C.	15,353	
Columbus, O.	88,150	
Dallas, Tex.	38,067	
Dayton, O.	61,220	
Denver, Col.	106,713	
Des Moines, Ia.	50,093	56,359 ('95)
Detroit, Mich.	205,876	237,837 ('94)
Duluth, Minn.	33,115	59,396 ('95)
Fall River, Mass.	74,398	89,203 ('95)
Galveston, Tex.	29,084	
Grand Rapids, Mich.	60,278	79,424 ('94)
Harrisburg, Pa.	39,385	
Hartford, Conn.	53,230	
Indianapolis, Ind.	105,436	
Jacksonville, Fla.	17,201	25,130 ('95)
Jersey City, N.J.	163,003	182,713 ('95)
Kansas City, Kan.	38,316	40,676 ('95)
Kansas City, Mo.	132,716	
Lawrence, Mass.	44,654	52,164 ('95)
Lincoln, Neb.	55,154	
Little Rock, Ark.	25,874	
Los Angeles, Cal.	50,395	
Louisville, Ky.	161,129	
Lowell, Mass.	77,696	84,367 ('95)
Lynn, Mass.	55,727	62,354 ('95)
Manchester, N.H.	44,126	
Memphis, Tenn.	64,495	
Milwaukee, Wis.	204,468	249,290 ('95)
Minneapolis, Minn.	164,738	192,833 ('95)
Mobile, Ala.	31,076	
Nashville, Tenn.	76,168	
Newark, N.J.	181,830	215,806 ('95)
New Bedford, Mass.	40,733	55,251 ('95)
New Haven, Conn.	81,298	
New Orleans, La.	242,039	
New York, N.Y.	1,515,301	1,801,639 ('92)
Omaha, Neb.	140,452	
Paterson, N.J.	78,347	97,344 ('95)
Philadelphia, Pa.	1,046,964	
Pittsburg, Pa.	238,617	
Portland, Me.	36,425	
Portland, Ore.	46,385	81,342 ('95)
Providence, R.I.	132,146	145,472 ('95)
Pueblo, Col.	24,558	
Richmond, Va.	81,388	
Rochester, N.Y.	133,896	144,834 ('92)
Sacramento, Cal.	26,386	
Saginaw, Mich.	46,322	44,642 ('94)
St. Louis, Mo	451,770	
St. Paul, Minn.	133,156	140,292 ('95)
Salt Lake City, Utah	44,843	48,076 ('95)
San Francisco, Cal.	298,997	
Savannah, Ga.	43,189	
Scranton, Pa.	75,215	
Seattle, Wash.	42,837	
Springfield, Ill.	24,963	
Springfield, Mass.	44,179	51,522 ('95)
Syracuse, N.Y.	88,143	91,994 ('92)
Tacoma, Wash.	36,006	
Toledo, O.	81,434	
Topeka, Kan.	31,007	30,151 ('95)
Trenton, N.J.	57,458	62,518 ('95)
Troy, N.Y.	60,956	64,986 ('92)
Washington, D.C.	230,392	
Wilmington, Del.	61,431	
Wilmington, N.C.	20,056	
Worcester, Mass	84,655	98,767 ('95)

FOREIGN CITIES.

	Latest Census.
Alexandria, Egypt	250,000 ('94)
Amsterdam, Netherlands	456,000 ('95)
Antwerp, Belgium	262,000 ('95)
Athens, Greece	108,000 ('89)
Bangkok, Siam	200,000
Belfast, Ireland	256,000 ('91)
Berlin, Germany	1,677,000 ('95)
Birmingham, England	478,000 ('91)
Bombay, India	822,000 ('91)
Bordeaux, France	252,000 ('91)
Brussels, Belgium	190,000 ('95)
Budapest, Austria-Hungary	492,000 ('90)
Buenos Aires, Argen.	691,000 ('96)
Bukharest, Roumania	196,000 ('92)
Cairo, Egypt	430,000 ('94)
Calcutta, India	811,000 ('91)
Canton, China	2,000,000 ('95)
Cape Town, Cape Col.	51,000 ('91)
Christiania, Norway	148,000 ('91)
Cologne, Germany	322,000 ('95)
Constantinople, Turk.	874,000 ('85)
Copenhagen, Den.	313,000 ('90)
Dublin, Ireland	245,000 ('91)
Edinburgh, Scotland	264,000 ('91)
Glasgow, Scotland	658,000 ('91)
Hague, Netherlands	186,000 ('95)
Hamburg, Germany	626,000 ('95)
Havana, Cuba	200,000 ('87)
Hongkong, Asia	221,000 ('91)
Johannesb'rg, S. Af. R.	103,000 ('96)
Lisbon, Portugal	308,000 ('90)
Liverpool, England	518,000 ('91)
London, England	4,433,000 ('96)
Lyons, France	416,000 ('91)
Madras, India	453,000 ('91)
Madrid, Spain	499,000 ('90)
Manchester, England	505,000 ('91)
Marseilles, France	404,000 ('91)
Melbourne, Victoria	439,000 ('94)
Mexico, Mexico	340,000 ('95)
Milan, Italy	452,000 ('95)
Montreal, Canada	217,000 ('91)
Moscow, Russia	826,000 ('93)
Naples, Italy	527,000 ('95)
Odessa, Russia	328,000 ('93)
Paris, France	2,448,000 ('91)
Pekin, China	1,650,000
Quebec, Canada	63,000 ('91)
Rio de Janeiro, Brazil	523,000 ('95)
Rome, Italy	472,000 ('95)
St. Petersburg, Russia	1,036,000 ('93)
Santiago, Chile	336,000 ('95)
Shanghai, China	405,000 ('95)
Stockholm, Sweden	272,000 ('95)
Sydney, New S. Wales	424,000 ('94)
Tashkend, Rus. Turk.	121,000 ('85)
Teheran, Persia	150,000
Tokyo, Japan	1,242,000 ('95)
Venice, Italy	155,000 ('95)
Vienna, Austria-Hun.	1,365,000 ('90)
Yokohama, Japan	160,000 ('95)
Zurich, Switzerland	149,000 ('96)

PRONOUNCING INDEX OF GEOGRAPHICAL NAMES AND TERMS.

KEY. — VOWELS: **ā** in **lāte**, **ă** in **făt**, **â** in **câre**, **ä** in **fär**, **á** in **lást**, **ạ** in **fạll**, **ą** in **wąs**, **ą̄** in **finą̄l**, **au** in **author**; **ē** in **mē**, **ĕ** in **mĕt**, **bĕrry**, **e͟** in **ve͟ll**, **ē͟** in **tē͟rm**, **o͟** in **novo͟l**; **ī** in **fīne**, **ĭ** in **tĭn**, **ï** in **polïce**; **ō** in **nōte**, **ŏ** in **nŏt**, **ȯ** in **sȯn**, **ô** in **fôr**, **o͟** in **do͟**; **ū** in **tūne**, **ŭ** in **nŭt**, **u͟** in **ru͟de** (= **o͟**), **u͟** in **fu͟ll**, **ua** = **wa**, **ue** = **we**; **ÿ** in **mÿ**, **y̆** in **hy̆mn**. CONSONANTS: **ç** in **çent**, **maçhine**, **c** in **can**; **ġ** in **ġem**, **g̃** in **g̃et**; **n̆** = **ng**, **N** = **ng** but is silent; **s̱** = **z**; **th** in **thine**; **x̱** = **gz**. *Italic letters are silent.*

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